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Jim Bergman

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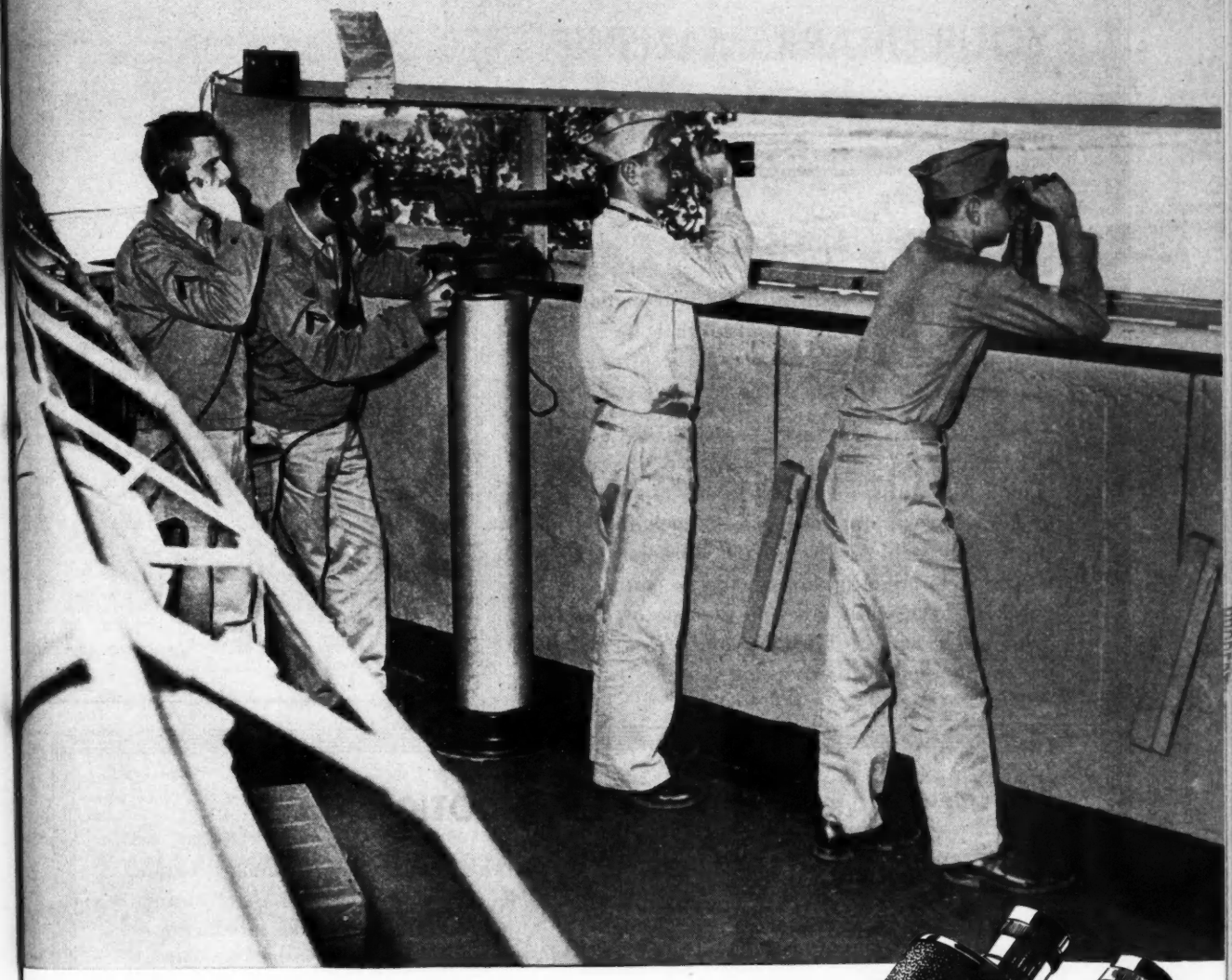

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Translated from the German

A CAPTURED German dispatch, during the last war, is revealing—and just as true today. We quote from March 1943 *The American Rifleman:* "The high percentage of captured Marines wore 'Marksman,' 'Sharpshooter,' or 'Expert Rifleman' badges. This proves the quality of the marksmanship training which these men have received—and the emphasis they place on it. Their marksmanship is *remarkable.* Once they had broken through our left flank, they settled down behind rocks—and *their rifle-fire broke up every counter-attack we launched!*"

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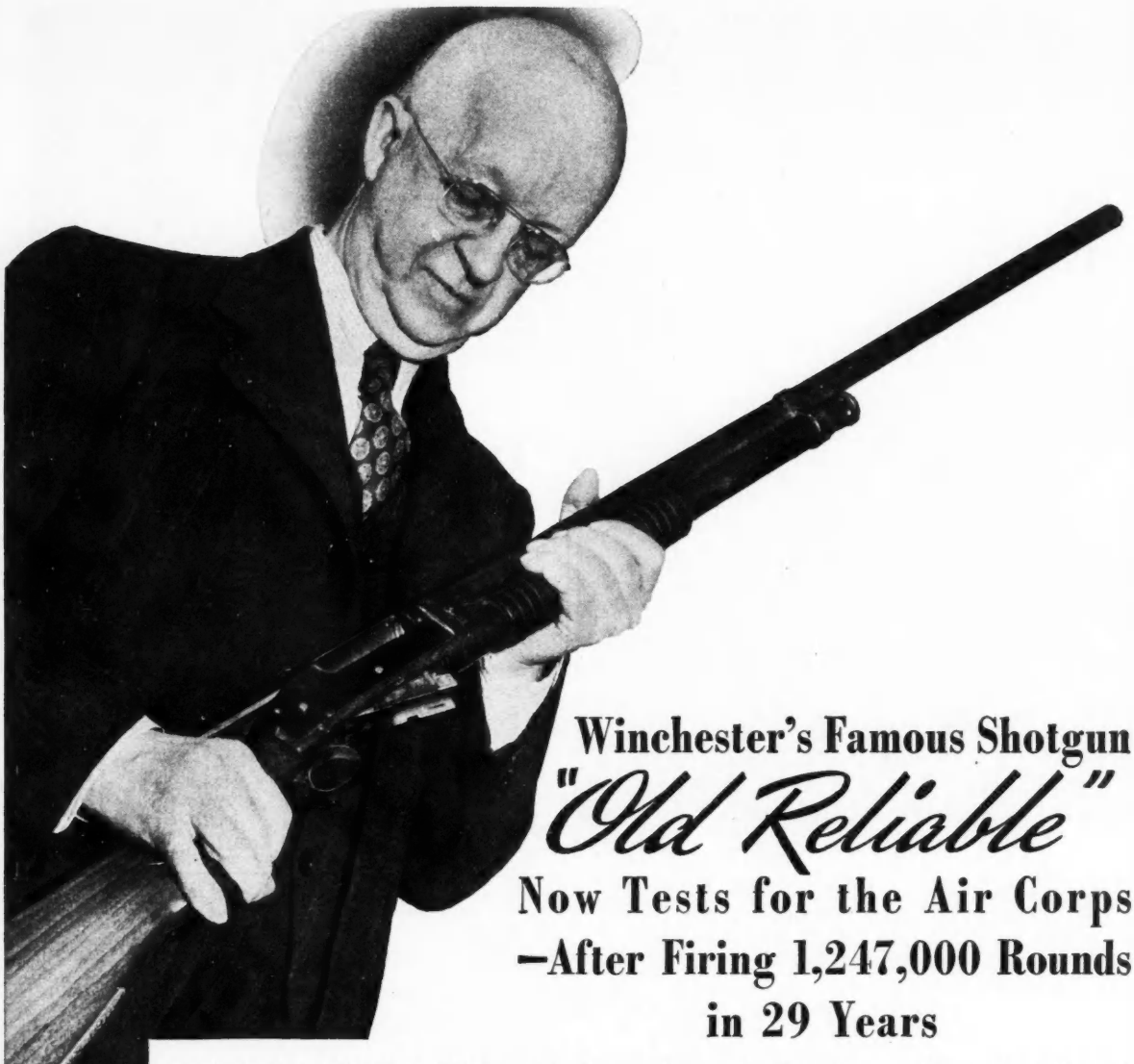

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The Official Journal of The National Rifle Association of America

AMERICAN RIFLEMAN

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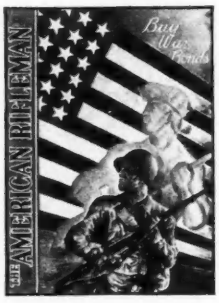

THE COVER: Inspired by the *background of victory*—Old Glory and the traditions of his fathers—the American Rifleman, vintage of 1943, goes into action with confidence and the certain knowledge of the eventual "unconditional surrender" of his enemies. The Fourth of July means to him the freedom and independence which it is his privilege again to bring to the world. The inspiring painting comes from the versatile brush of Jim Berryman, AMERICAN RIFLEMAN staff artist.

"Armed for Surrender?", an authoritative review of Italian weapons, was hurried into print in anticipation of a big Allied push against Fascist Italy, in which she will be forced to rely on every weapon within her arsenal. Former RIFLEMAN Associate Editor, John Scofield, author of the much-quoted article on Japanese weapons among many of his other ordnance subjects, is now a lieutenant in Ordnance at Aberdeen Proving Ground, Md.

"Muzzle Loading," a subject that is receiving more attention than ever among riflemen these days, suggests a Fourth of July sentiment in its reflections on the history and tradition of the old guns, and the romantic background which can be re-lived in present-day target shooting or hunting.

"Short Range Backlog" takes us back a few years to some practical shooting with the old stand-bys; at the same time giving suggestions for mid-range loads and reloads as a substitute for high-powered, long-range blasting.

NEXT MONTH:

The Militia Also Serves, a story promised for the July issue, is in type and awaiting lead position for August, after having been crowded out by the necessity of rushing "Armed for Surrender?" into print before the Italians and their weapons fold up, and soon we hope.

Antiaircraft, a story of the amazing protective screen developed by our army against hostile aircraft, which includes the much discussed new 90mm. rifle.

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ARMED FOR SURRENDER?

ITALY'S FASCIST ARSENAL—

THE WEAPONS OF IL DUCE'S FAST CRUMBLING HOPES FOR EMPIRE

By LT. JOHN SCOFIELD

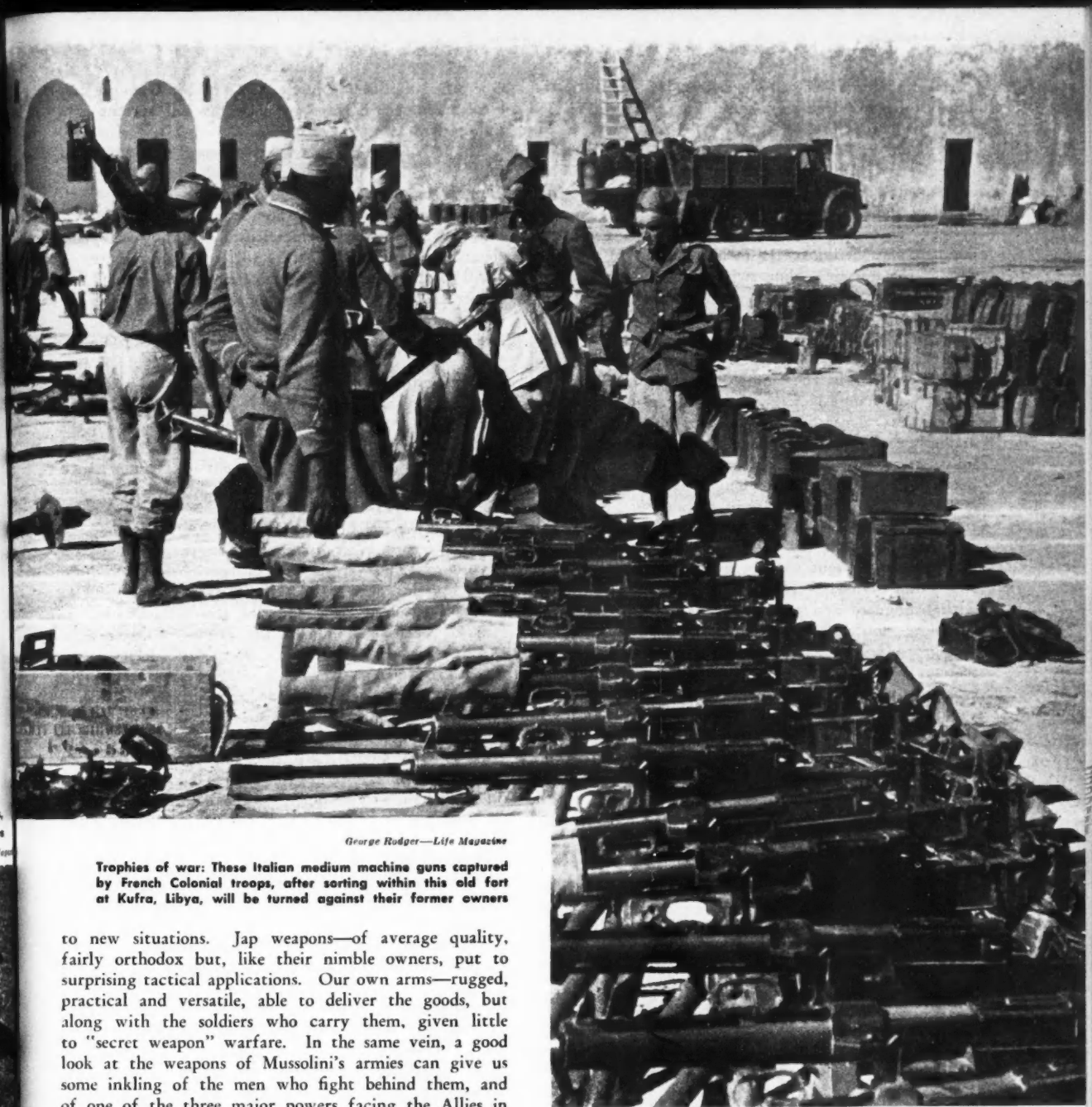
IT IS ALMOST AXIOMATIC that the lighthearted, actually peace-loving Italian has a miserable time of it whenever an attempt is made to recreate for him "the grandeur that was Rome." Caporettos and Adowas, Guadalajaras and Tunisias have befallen the gullible people of the Italian boot every time a prophet has appeared with a new dream of conquest in the Mediterranean—*mare nostrum*, they call it, our sea. This will-o'-the-wisp of assuming once more the dominant place in "our sea," of ousting the British and French from what once was Caesar's, has time and again goaded the Italians on to military disaster and left them dangling as the handcuff volunteer of someone else's scheme of world dominion.

Not as skilled as the German, nor as determined as the Jap, the aging Duce's legions still are relatively intact, a military factor to be counted heavily even after the thumping defeat of a whole North African army. Thirty-nine divisions was the price Italy paid for her abortive attempts at empire in North and East Africa; best estimates of what is left to Mussolini include 35 divisions of something like 12,000 men apiece in Yugoslavia and Greece, a dozen more on the Italian mainland, eight on the island stepping stones of the Mediterranean, a few in Russia and another six in France, plus an air force of about 1,400 planes. Figures like these give the lie to any ideas of cracking a "soft" underside of Europe. Better than 60 Italian divisions, along with those of Hitler and his neighbor-nations, add up to no soft underside. Like Germany herself, Italy almost certainly must be broken, her divisions destroyed or stalemated before her uncomfortable position as an Axis partner can be made altogether untenable. Actually, the one material shortcoming of the Italian armies as they stand today is armor. At his peak strength, Mussolini could rant of three armored divisions; all three fell in Tunisia with von Arnim and his veteran Afrika Korps.

Unfortunately the story of Italian weapons will bring to light no glib explanation of Italy's military debacles, nor can it give us a peep into the future, when the army she still has must be reckoned with. Much can be gleaned, however, from the study of a nation's arms, for they, like the nations themselves, mirror the people who made them. Consider Nazi weapons—skillfully finished, intricately planned. Both Germany's weapons and her warfare are subject to malfunctions, when Hitler's timetables go haywire and Nazi minds fail to respond as they should

Italian light mortar squad. Three riflemen, armed with 1891 Carcanos, protect mortarmen, also carry supply of the little 45 mm. mortar bombs

Thomas D. McAvoy—Life Maga



George Rodger—Life Magazine

Trophies of war: These Italian medium machine guns captured by French Colonial troops, after sorting within this old fort at Kufra, Libya, will be turned against their former owners

to new situations. Jap weapons—of average quality, fairly orthodox but, like their nimble owners, put to surprising tactical applications. Our own arms—rugged, practical and versatile, able to deliver the goods, but along with the soldiers who carry them, given little to "secret weapon" warfare. In the same vein, a good look at the weapons of Mussolini's armies can give us some inkling of the men who fight behind them, and of one of the three major powers facing the Allies in the 1943 line-up.

First, the rifle. The majority of Il Duce's homesick fighters carry obsolete 6.5 mm. Mannlicher-Carcanos, adopted by the Italian Army in 1891. "Invented" by M. Carcano of the famous Turin small arms factory, the bolt action model 91 is actually not a Mannlicher at all, though it does embody the clip-loading system of that action, with a six-round magazine protruding ahead of the trigger guard. The action itself is an adapted Mauser of almost primitive type, differing mainly from the present Nazi rifle in that the handle is not at the extreme end of the bolt but about two-thirds of the way back. As a consequence the rear of the receiver does not form a complete circle, but must be cut away at the top to allow the upright bolt handle to pass.

Under the front end of the receiver is a transverse rib, à la Mannlicher, which fits into a groove in the stock and serves to transfer the shock of recoil to this area rather than to the relatively weaker wrist of the stock. Unlike the Germans, Italy's arms designers have not seen fit to turn down the bolt handle of their Carcano, which sticks out at an awkward right angle from the bolt.

Physical characteristics of the old-fashioned Carcano are hardly prepossessing—certainly not so in comparison with our infantryman's Garand. Like both the German and Japanese rifles, it is long and unwieldy—five feet two-and-a-half inches with its near foot-long knife bayonet. Weight with bayonet and a full magazine is close to ten pounds. Sometimes called the Terni, the Carcano has a full-length stock with handguard and a

steel cleaning rod beneath the barrel, lacks both cut-off and pistol grip. Sights are of ancient pattern, "V" and barleycorn; the rear sight is a tried-and-true leaf and tangent-curve, graduated from 600 to 2,000 meters in increments of 100, and with no provision for windage adjustment. Unusual in a military rifle, the 30¾-inch barrel of the Carcano is rifled with a 4-groove gain-twist system. Grooves start at the breech with a twist of one turn in a little over 19 inches, increase to a turn in 8¼ at the muzzle. Sling swivels of the model 91 are of conventional pattern, although the Italians, in common with their Pacific allies, appear not to use the sling as an aid in steadying the rifle.

A nation of mountaineers, Italy has her mountain troops, Alpini, and her bicycle-riding Bersagliere, riflemen of a special unit founded in the mid-19th century by Victor Emmanuel. Generally these, and possibly other troops, artillery, cavalry and the remaining scraps of her armored units, carry *moschettos*, three-foot bolt-action carbines patterned after the standard long rifle.

Two models of carbine are in common use, both identical in essentials with the long 1891 Carcano. Main differences between the carbine of 1891 and the more recent type, thought to be a 91/24 pattern, lie in the stocks and bayonets. The 91/24 has a full-length stock with handguard and an orthodox knife bayonet, while the older *moschetto* has a lighter half-length stock, no handguard and a long folding bayonet, triangular in section, which can be hinged back against the forestock when not in use. Both models are streamlined to the extent of turned-down bolt handles and shortened versions of the tangent-curve rear sight. The 91/24 has its sling swivels on the lower side of the stock; the sling of the 91 resembles that of our M1 carbine in lying flat against the left side of the gun.

Various other rifles and carbines of old pattern are still used by the rifle-poor Italians—ancient models that were out of date at the turn of the century. Even some of the impossibly clumsy Vetterli .41's, changed over from their original caliber to fire the 6.5 mm. cartridge, are seeing use in the present war. All of these are probably considered "home guard" arms, doled out to the village oldsters against the day of the Allied invasion. One other of these old pieces, a .22 caliber Gardona carbine, manufactured in the eighties, is still current as a training weapon.

The Italians have also a relatively new automatic rifle, the 6.5 mm. Revelli, which may have been used by Italian infantry units in Russia or in the ill-fated African venture. None apparently has been seen by Allied observers and only the barest characteristics are known: weight about nine pounds, rate of fire 40 rounds per minute.

All of these arms use the same rimless 6.5 mm. (.256 caliber) cartridge, which has remained standard with the Italians for over half a century. In appearance the Italian 6.5 is nearly identical with Japanese rifle ammunition of the same caliber, although the bullet is a long, round-nosed projectile of 161.8 grains, while the Japs use a lighter pointed bullet. Velocity is relatively low, about 2,300 feet per second as compared with the 2,700 of the standard Nip round. The high sectional density of the Italian bullet is a point in its favor; such a long (1.182 inch), heavy bullet holds its energy and punch well over much of its maximum range. Muzzle energy of the Italian 6.5 is rated at 1,925 foot pounds, and its maximum *accurate* range in the neighborhood of 800 to 1,000 yards. The charge in recent loadings is 34.5 grains of a coarse cordite-type powder.

Not long before the start of the present war the Italians decided to increase the caliber of their rifles and light machine guns to 7.35 mm. (.289 inch). Apparently the change-over never assumed other than minor proportions, although both rifles and carbines chambered for the new cartridge were issued in small numbers at least. Basically nothing more than copies of the 1891 Carcano, the model 1938 rifles differ, in addition to the larger caliber, only in being shorter (40 inches), considerably lighter (7½ pounds), and in carrying a bayonet which can either be folded back along the stock or removed entirely and used as a dagger. The 1938 carbine compares similarly with the 91 and 91/24 *moschettos*. Some of the few 1938 arms issued were later rebarreled for the original 6.5 mm. cartridge, and in the process fitted with a heavy V-notch rear sight, permanently set for a battle range of 300 meters.

Italian handguns closely parallel the none-too-good rifles and carbines of Mussolini's discredited legions. The Bodeo 1889 service revolver, upon which some troops, notably machine gun squads, must rely for incidental protection, is an impossibly clumsy double-action affair firing a 10.35 mm. (.41 caliber) cartridge. Over nine inches long, its stellar attraction is a six-round cylinder which does not swing out for loading. To make the Bodeo even less attractive, if possible, empties have to be rammed out one by one! Other Italian military revolvers are little better than the Bodeo—the Sfares, Glisentis and Castellis, nonregulation but carried by some troops, are of poor design and workmanship.

Two basic models of self-loading

These Italian artillerymen, setting up light field piece, are armed with newest carbines

Thomas D. McAvoy—Life Magazine

This 1938 Beretta sub-machine gun is the best of Italy's generally second-rate shoulder arms. Caliber is 9 mm., same as German, British counterparts. Double triggers are for selective fire—single or auto

pistol are used in the Italian land forces, the Glisenti and Beretta, both firing a short 9 mm. pistol cartridge. The former, patented in 1906 by the Siderurgica Glisenti Company of Turin, was adopted as a standard sidearm in 1910. Both outwardly and mechanically the Glisenti resembles Japan's by-now famous Nambu 1925 autoloader. The action, which is markedly similar to that of the Italian Fiat-Revelli machine gun, is one of the most curious to be found in a military pistol. Barrel and bolt, which are definitely locked at the instant of fire, recoil together until a swinging block is released from the bolt, which then continues its rearward travel alone to eject the empty case and pick up a live round.

The Glisenti, of which two models, adopted in 1910 and 1934, are in use, has a safety in *front* of the grip, a peculiarity shared only with the Jap pistol and the freakish Schwartzlose of 1908. Sights are primitive and non-adjustable and the finish, particularly as regards the inner workings, is far below par. A fair estimate of Glisenti virtues may be gleaned from the fact that it was submitted for the U. S. tests between 1903 and 1911, during which the .45 caliber Colt pistol was selected for our forces, and was then considered so lacking in merit that an actual trial of it was never made.

During World War I the Glisenti apparently did not prove altogether satisfactory even by Italian standards, and was replaced to some extent with a more orthodox pistol made by the ancient firm of Pietro Beretta of Brescia, which has been turning out arms since the 17th century. A conventional autoloader, designed purely for military use, the Beretta until recently at least had not been officially adopted by the Italian Army, though it is popular with both officers and noncoms, who prefer it to the impossible Glisenti. Large numbers of these pistols were produced during the First World War, when the heavy losses in prisoners and materiel sustained by the Italians in 1917 brought about an acute shortage.

The Beretta pistol, a simple blowback design, is notable mainly for its small size, six inches overall, and its extreme simplicity. Weight of the 1934 model is only a pound and a half. An extension for the little finger, projecting from the base of the handle, is made necessary by the short grip and diminutive size of the weapon.

Cartridges used in both the Beretta and Glisenti pistols are the 9 mm. Corto (short), which are definitely weaker than the comparable German loadings. Probably the reason is that the Glisenti, which was the first 9 mm. arm adopted by the Italians, would not stand up under the recoil of the more powerful German load. As it is, the Italian cartridge is no pipsqueak. Its 125-grain jacketed bullet, with its distinctive truncated-cone nose shape, turns up a velocity of close to 1,000 foot seconds in the short barreled arms. Neither the 9 mm Parabellum or Mauser cartridges will fit these Italian 9 mm's; the cases of both are too long.

Far more potent 9 mm. arms are the Italian submachine guns or "machine pistols", which in point of priority, if not of actual development, may be considered an Italian invention. The first of these small pistol-caliber arms to be adopted by a European army was the Villar-Perosa, which appeared during the First World War, about a year before the debut of the Bergmann *musquete*. These early Villar-Perosas, developed as light automatic guns for mountain fighting, and later adapted to aircraft, were in reality small replicas of larger ground machine guns, mounted double, with two barrels and actions set side by side. Recoil operated and air cooled, these original Villar-Perosas were fed from twin box magazines set on the top of the actions. Though bipod mounted, and not fired from the shoulder, the Villar-Perosa stands as the progenitor of pistol-caliber machine guns, and as such, the legitimate ancestor of the present tribe of "squirt-guns".

In 1922 the Italians adopted a vastly different version of the 9 mm. Villar-Perosa—a conventional three-foot submachine gun feeding from a top-mounted box magazine, and adapted to both single and automatic fire. The 1922 submachine gun, like its predecessor, is recoil operated, though not a pure blowback type. The long bolt is made to revolve a few degrees by cam slots along its side, which effectively slows the rate of fire. Sights are offset to the right in order to flank the long magazine, which perches dead center over the action.

These 1922 submachine guns appear to have been entirely replaced by two Beretta models, both 9 mm. guns, which now are the standard pistol-caliber shoulder arms of the Italians. The earlier model still retains the turning-bolt action of the Villar-Perosa, of which it is a development. The forestock of the old Beretta is short, with no handguard, and the gun is fitted with a folding bayonet similar to that of the 91 *moschetto*. A disagreeable feaure is the exposed coil spring and bolt-rod of the action, which makes the gun all too liable to malfunctions and stoppages if dirt or grit is allowed to collect in these moving parts.

In 1938 a new model of the Beretta machine pistol was adopted, in which many of the shortcomings of the older gun were eliminated. A straight blowback, the 1938 Beretta has a perforated barrel-guard and compensator, a miniature knife-bayonet of ordinary type and two triggers, one for releasing single shots and another, the rear one, for full auto fire. The unhandy top-magazine of the earlier Villar-Perosa and Beretta guns has been abandoned in favor of a practical bottom-loading type, and the action is well enclosed against the intrusion of dirt or sand. The sling is on the *left* side, while that of the older model is beneath the gun. A beautifully finished arm, recalling the Solothurn and Neuhausen variants of the German Bergmann, the 1938 Beretta is in appearance at least one of the best of Italy's generally second-rate weapons. (*To be concluded.*)

MUZZLE

The hunter measures the powder carefully and charges the piece. Then he moistens the patching cloth with his tongue and seats the ball in the muzzle.

Finally he places the cap on the nipple and is ready for anything.

By E. M. FARRIS *

IT WAS A muzzle-loading, flintlock rifle, a double-barreled affair, in the hands of Tim Murphy, famous Pennsylvania hunter, that turned the tide at Stillwater and precipitated the avalanche of Americans that swept Burgoyne's army into oblivion. From the crotch of a tree Tim shot the British General Fraser at 300 paces! Little was thought of the matter on the American side at the time. It was an ordinary occurrence among the Continentals and especially among Dan Morgan's Virginians, of whom Tim was one. But it had the British worried—plenty.

It's a far cry from the wars of those days to the wars of today. It's a far cry from the old muzzle-loaders to the Garand, the M1 carbine and the Tommy-gun. But the old "flint-guns" were just as much tops in their time as are the fast-spitting weapons of 1943. Perhaps the muzzle-guns are a symbol to us in this hectic era of rush, tear and speed, of the quieter more simple life of our Colonial fathers.

One of these days, when you're fed up with the bang and clatter of things, dig out gran'pap's "ol' Betsy" and commune with her a while. Look her over critically, objectively. Consider her past glories. She's not of the twentieth century. She was probably fashioned in the shade of the forest by skilled, deliberate and loving hands. She never knew factory smoke, noise or whistles.

Current conditions are giving us a little taste of the simpler life of those times. The pace of our private lives has been, perforce, reduced. We walk and find some pleasure in rediscovering our feet and legs. We use bikes and drive horses. We ride trolleys and we ride busses. Now we're faced with a shortage of ammunition because all of our munitions factories have gone to war. Therefore, it behooves us civilians to find ways of conserving what ammunition there is for our future shooting.

Having considered "Betsy's" past, now let's consider her future. You know that old gal's not finished.

* President, National Muzzle Loading Rifle Association.

LOADING

Carefully he trims the patch close and

rams the ball home with steady and uniform pressure all the way down—

There's many an X-ring in her yet. Give her half a chance and she'll do at least what she did for Tim Murphy and his contemporaries. Not that we're looking for the scalps of British Generals. But we could supplement our meager protein diet with a good old fashioned squir'l potpie for example, or for that matter a venison stew, or an elk or moose steak might do beautifully. And target shooting with her is a delight. These guns may be the answer to our "duration" shooting.

To get the most out of these flint-guns and the later "cap and ball" guns, we must adapt ourselves to the pace of the gun. It's not that of modern times, but it is a delightful relief from the terrific speed of today. It's slow and deliberate and exacting. Though black powder isn't the cleanest stuff in the world, there seems to be plenty of it, and there's a lot of satisfaction in rolling your own components into a charge that you know is going to do just what you planned for it to do.

You've worked that load out carefully. Painstakingly, you've tried varying charges of powder of all sized grains from Fg to FFFFg, behind balls with cloth or buckskin patches greased with everything from spittle to mutton-tallow. You've watched and recorded your targets and results and checked them again and again. Then you've selected the one load that seemed to offer the best possibilities, worked it over carefully, and at length arrived at just the right combination of powder, ball, patch and lubricant for the gun and the man.

Target shooting with the old heavy-barreled rifles is a most exacting science. It challenges the skill and resourcefulness of the shooter to the limit. Each rifle is an individualist. Each must be studied carefully by its owner and all its peculiarities and idiosyncrasies duly considered if the two are to make a successful pair in match shooting. When this teamwork is realized, the results are likely to be most pleasant.

You might be surprised to know that there are many parts of the country where the old matches have never even been interrupted by the passage of time. They're

"Rifle Marksmanship as Important as Ever"

Lieut. General Lesley J. McNair
Commanding General, Army Ground Forces

AIMED RIFLE FIRE, or marksmanship by the individual soldier, is just as important in this war as it has been in any previous conflict in which the United States has engaged, says Lieut. Gen. Lesley J. McNair, Commanding General, Army Ground Forces. Despite the growth in development and use of automatic arms in this war, Gen. McNair says aimed fire retains its importance.

Back at his desk in Washington, looking fit and well despite recent wounds sustained in Tunisia, Gen. McNair gives the American Army helmet credit for minimizing the effect of one of two shell fragments which struck him at an advanced artillery observation post in North Africa. A jagged fragment from a German shell tore through the helmet which so slowed down the missile that it did not penetrate the skull. Another fragment raked his shoulder and severed an artery.

Asked the specific question: "Is rifle marksmanship an important factor in the war to date, or is massed fire more important?" he replied as follows:

"Rifle marksmanship is just as important as it ever has been in any war in which we have been engaged. We are making better shots of our people because we have more time to train skilled shots, and we can carry their training further. While we haven't had much ground fighting I think the German will find our trained riflemen are pretty good, just as he did in the last war. Our M1 rifle in the hands of a well trained soldier and marksman is bad news for the enemy."

—An exclusive Rifleman interview by Walter McCallum.

Muzzle Loading

(*Continued from page* 11)

still shooting them just as they did back in the old days. At Canal Fulton in Ohio, for instance, they have maintained an almost unbroken history of matches on the same range site since 1812. About Terre Haute and Evansville in Indiana, at Shartlesville, Pennsylvania, Cape Girardeau, Missouri, and in many places in the hills of Tennessee and Ohio the fans have seen to it that the old barrels have never rusted nor lacked for exercise.

This matching of rifle, load and shooter goes for the hunter, too. These guns have the accuracy for fine squirrel shooting and the wallop to knock the biggest of game down for keeps. But you must learn to be a hunter. You must get in close and that means you stalk your game. You may not get as much but there'll be more fun in the getting.

Guns by old masters . . . Warner, Billinghurst, Brockway, Ferriss, James, Lewis, Reinhard, the Sieberts, Tobias and others . . . are fast going into hands which cherish them for their great qualities. Far too few are found to meet the needs of our ever-growing crop of "muzzle-gun" shooters. This is also true of the fine early military arms with bores *sans* pit or blemish.

Even the handgunners are having difficulty locating the fine Colt, Remington, Starr and Rogers & Spencer .44's.

New guns are already being seen on the ranges; as fine as ever were built in the days of our ancestors. This does not apply to the long range "slug" guns—only the round ball pieces that fire with patch. Unfortunately at this moment, neither materials nor mechanics can keep up with the demand. After Hitler, "Muss" and their yellow partners-in-crime are put into cold storage, we undoubtedly will witness the interesting development of many small shops making locks, stocks and barrels. Some will make the entire piece as did the big-name boys of an earlier period. There is a whisper of standardizing the old guns . . . but that won't work. The muzzle-gun and its gunner are individualistic and they want to be left to their own ideas and devices. It would be a sacrilege to see the fine lines of the "Kentucky" eliminated when the lighter pieces are fabricated. Make the heavy match pieces to more modern design as to stock, butt plate and pistol grip if you will, but let there be no sharp departure from the romantic lines of the "Kaintuck" nor from the skill and spirit of the men who first made and shot them.

In slowing down to the pace of "ol' Betsy" we learn to shoot less, to be sure, but perhaps we learn to shoot better. It's a case of quality rather than quantity. And that situation, to Americans of this generation, is something to ponder hopefully while we watch many of the old values crumble under the impact of a truly world-wide conflict in which we ourselves are vitally concerned.

Independence Day

SAID Jan Christiaan Smuts, fighter and philosopher, in 1934—"The disappearance of the sturdy, independent-minded, freedom-loving individual and his replacement by a servile mass-mentality is the greatest human menace of our time." Eight years later, when that "servile mass-mentality" had enabled the whole miserable course of "appeasement" to flood its muddy, bloody way over the peoples of the world, the old soldier returned to the same theme (*Life* magazine, Dec. 28, 1942) and wrote: "Freedom is not a thing that can be imposed from without. It can only be created from within. Its very essence is that of self-creation."

It is appropriate on this war-time Independence Day for us, as Americans, to ask ourselves "Have we passed on to our children those ideals of a 'sturdy, independent-minded, freedom-loving' citizenry for which our forefathers pledged their 'lives, fortunes and sacred honor?' Or have we weakened the strength of our democracy and the fiber of our children by the gradual acceptance of a 'servile mass-mentality' which has substituted *inter-dependence* for *independence?*" Inter-dependence is the doctrine of the dictator and the bureaucrat who would parcel out to mankind just that much of freedom as is, in the mind of the political leader, desirable or necessary. It breeds fear, lack of initiative, a follow-the-leader spirit. Independence breeds pride in accomplishment, initiative, courage, thrift, and develops leaders who can inspire—because men who are independent cannot be driven.

What has the white heat of war shown? A frank appraisal of the picture is not flattering to our generation of Americans.

Hanson Baldwin, trained observer, loyal American and long-time friend of our fighting men, reporting on a trip to Tunisian battlefields (*Life,* June 14, 1943) said: "All of them (American troops) had courage, many were prepared to die, but most of them were not originally imbued with a *driving dynamic purpose* that would express itself against an enemy on the battlefield. Tunisia reflected the effects of rather easy living and thinking in America. . . . First and most important need is for the development of hard, tough, aggressive and competent leaders . . . they must be men of moral as well as physical courage; they must be able to inspire confidence and respect. The second most important need is for a change of attitude on the part of the people and the troops. *We need a stiffening of the soul.*"

Said an American general officer to Baldwin: "It is all very well to maneuver, to retreat and advance, but there comes a time in every campaign when you must *hold* till hell freezes over. That determination—to do or die—has been lacking."

From the Pacific theaters of war comes the report of a great American fighter who rose from the ranks in both war and peace. "This trip opened my eyes to one of the great fallacies of our time. In the decade before the war we spent billions on the theory that a superior few could plan the lives and duties of 130,000,000 people. Now we are spending many more billions to inject into our fighting men the qualities of self-reliance, initiative and imagination which we had come to deprecate." (Rickenbacker, *Life* magazine, Feb. 8, 1943.)

It is unpleasant to face the truth on this July 4th, 1943, that we are paying the price in the lives of our sons for our failure to indoctrinate them with the doctrine of the dignity and independence of the individual. We are paying a bitter price for having accepted the synthetic "freedoms" doled out by bureaucrats as a substitute for the real freedom which an independent people *creates within itself* out of its own courage, thrift and resourcefulness.

"Security from the cradle to the grave" means neither liberty, freedom nor independence if its success as a program depends on the subservience of the individual to the dictator or bureaucrat. Talk of "Four Freedoms," or any other number, will inspire none of the ordinary people of the world to fight and die if their natural cynicism causes them to wonder what *other* "freedoms" are to be withheld by their rulers.

Today one question troubles many of the world's people. The question is, "What are we fighting for?" The answer which we, as Americans, can give—the *only* answer that is worth the sacrifices we are making, the *one* answer that will arouse the fighting enthusiasm of every man everywhere is—"We fight for the dignity and *independence* of the common man!"—C. B. L.

Short Range Backlog

By ALLYN H. TEDMON

THESE BLANKETY BLANK "A" gas cards are teaching us to look this war situation smack in the face as realists rather than luncheon club planners. Yes, these gas cards are teaching many of us what our feet were made for; are giving us a short range view of things as they are, not as we thought they were. Wasteful, long range chuck shooting is out until the war is over simply because there is no sporting rifle ammunition being made. Tough, ain't it? Just goin' to ruin our sport. No gas, no ammo, what we goin' do? Gosh, no car! I'll say it's tough.

Well, when I was a kid in New Jersey we rode our bikes. I well remember one trip my brother and I made to the old Greenville Schuetzen Park on the trolley. Another trip over to Paterson on the train to shoot is fresh in memory. Roy Tinney and other prep school chums used to ride the train out to our home where we had a fair place to shoot. The late C. W. Rowland told me of the trips he took to rifle tournaments, sometimes by train, sometimes by horse and buggy.

Jim Dunse, Range Officer of the Colorado Rifle Club, was telling me recently of how he rode the trolley out to the old Denver Rifle Club range. The contestants came early, brought their lunches and stayed late; some rode bikes, some drove horses, others rode the trolley with Jim. Those fellows got transportation. Take it from me, no gas cards could have kept those men from their sport, not them. Those fellows all had a short range view of rifle shooting and in that day the rifle range was a really important place. The results of a big shoot were worth newspaper space; take a scan of the dailies back forty or fifty years and see for yourself.

Forty-five years ago the Army was adopting the Krag, but many were yet wedded to the tough old flip-up Springfield. And my recollection is, and I believe history records, that Spaniards in Cuba and the Islands were about as dead after being socked with a 500 grain pellet of .45 caliber as are the Nips and Hitlerites who are getting the daylight let into them with a .30 caliber, 150 grain bullet fired by the surprise of the war, that All-American Garand Rifle. All of which proves that it is all merely a matter of viewpoint. And if you don't believe this, do as I did and go back through THE RIFLEMAN magazine twenty-five or thirty years and gather to yourself a little basic education. I think then you will decide that the situation isn't half as black as you may at first think it is.

One thing many have apparently overlooked is that it really isn't necessary at all to have a 4,000 f.s. velocity rifle to kill a woodchuck. If you have available copies of *Arms and the Man, Old Recreation, Outer's Book* and the like, you will find stories of where those "ignorant" fellows, Iron Ramrod for instance, Doctor Mann, Leopold, Roberts, Donaldson and others actually killed chucks with such rifles as the .32-40, .28-30 and even that sparrow tickler, the .45-70. Yep, it can be done, believe it or not, and that is just what the most of you are going to have to do this summer if you do any shooting.

Of course, a lot of us have on hand a can or two of some favorite powder, maybe a few hundred special bullets

Mister Mountain Marmot checks his range for perennial enemies

Courtesy Nature Magazine

and a trickle of primers. But the vast majority of reloaders and non-reloaders are in the position of the fellow who recently exploded into my ear: "Don't talk chuck hunting to me. Hellsfire, how far would I get with one box of cartridges, all I got, and no more to be had? Want to buy the rifle?" Now as for my own part if some hillbilly should slip down the chimney and swipe

Courtesy Nature Magazine

Photo by W. J. Schoonmaker

The Mayor and the Town Council study the intruders' credentials —and (right) a brace of groundhog sentries jump to the alert

the last of my little supply of jacketed .25 caliber bullets, I could still shoot and have a lot of fun at it. Of course, I'd have to get down on my belly and stalk in the real old-fashioned way, but if I did my part I'll bet I'd come back with a punched meal ticket.

In my rifle rack is an old Maynard .25-20 that will shoot into a dime at 50 yards with 4 or 5 grains of Unique and a good 85 or 90 grain cast bullet. Next to it is a Tip-Up Stevens .25-21 and next a Stevens Ideal Model 45 (44 action) same caliber that spits some wicked spurts from its 30 inch barrel if and when it is properly fed. But in addition there stands my old reliable 044½ Stevens, .25-20 that has piled up prairie dogs by the ton, almost, and it can do it again. The old load was 8 grains of Schuetzen or duPont Rifle No. 1, or 6 grains of duPont Shotgun, either on top of a .22 Short case full of FFG black on top of a black-powder primer. And just by luck I have a few old style 1½ primers that behaved themselves out where the West begins, but that apparently played the dickens with small bores back in the humid East and South.

A great many of you fellows have one to several old rifles hanging on the wall, or hiding in the hall closet. Dig 'em out and clean 'em up. There's a war on. And I'll soon know it, too, as I see I neglected to give the bullet weight above; the bullet I used was the 67 grain Ideal, and the late Chauncey Thomas once cast me a wagon-load of them and what fun we had with them. Sure the outfit would shoot.

I remember once in particular when I was driving along and spotted a prairie dog sitting up at what proved to be a good long 85 yards. I brought the old open-top car to a halt, and shooting over my knees from the front seat I held the ivory right there and slipped the trigger and—blooey. Mr. Dog turned over and lay very still. That was a long shot in any man's language but my eyes were much better then than now.

Those "old smoke-wagons" could and did shoot. It was and is a much harder job to get results than from our present, or should I say our past, smokeless factory bullet outfits. For instance, Alfred Loetscher of Iowa, and by the way the man who does the finest job on Stevens actions that I know, used to get inch groups from his .25-21 with 20.5 grains of FG black powder and 85 grain cast bullets. Another fellow who made the old .25-21 Stevens talk was C. S. Landis, now Gun Editor of *Rod and Gun in Canada*. He drove fifteen tacks one time at 44 yards with a load of 1 grain of duPont No. 1 rifle powder and 16 grains of King's Semi-Smokeless and a regular 86 grain cast bullet.

If you dust off some of the old magazines I have mentioned and read them, you will get a lot of good dope on these rifles by these men. The best one source for wartime loads is J. R. Mattern's "Handloading Ammunition". There are a lot of good books on reloading, but none better than Mattern's. Also you will get a lot of loads from the Stevens catalogues of some forty odd years ago, and don't overlook the old Ideal Handbooks. Whelen's "American Rifle" is very much worth while, but you really must get farther back than the period his book covers.

Some of you fellows will recall maybe the high speed loads that I worked up, along with others, for the .25-20 Single Shot cartridge. Just to show you that because a rifle is booked for 3,500 f.s. velocity, there is not always a good reason why the same rifle won't shoot well at 1,500 f.s. velocity, if properly fed. This high speed version of the .25-20 SS was nothing in the world but the same old .25-20 SS with new powder, primers and bullet, and a new modern firing pin. The same rifle could squirt a bullet at 2,600 f.s. velocity at one shot and the next load at only 1,500 f.s. It just meant changing the sights.

The same thing applies to the .22 Hornet and the .22 Lovell. The other day someone tried to tell me that you couldn't shoot black-powder and cast bullets in a "modern" Hornet. Applesauce! My old friend, the

late Ed Howard shot maybe a wagon-load of gophers, jackrabbits and the like with his old Winchester .22 WCF, black-powder and cast bullets. What is the Hornet anyway but the .22 WCF doctored up a little with latest fodder in its brass belly! It's just a matter of bullet fit, and that's part of the black-powder or low velocity game.

About four years ago our son Seward and I took a whirl at some marmots over in the high country south of Buford, Colorado. He was shooting the little old 044½ Stevens .25-20 SS, loaded with 14 grains of duPont 4227 and a Remington 60 grain open-point bullet, ivory bead front and tang rear. This fellow is "p'ison" offhand with a rifle on game. That day he showed the old man how it is done when he smacked down a big, old marmot at 60 yards as the little beast galloped madly over, between and around the rocks for its den. This was one of the most sporting shots I have ever seen made and it wasn't luck, not with that guy at the helm. I've seen him do the same thing on deer with the .250 Savage, but then he started at the game way back when Pikes Peak was a hole in the ground.

On the same trip I had my .25-20 SS Stevens with the short neck Risley chamber, loaded with 16 grains of duPont 4227 and a Remington 60 grain open-point bullet. Here was sure a sweet shooting outfit and deserved what the .22 WCF got; very accurate but far too powerful for prairie dogs. It would make a mess of a marmot except with a chest shot. At that time the rifle had a Weaver 29S scope mounted on it. I made one fair shot myself when I spied a whistle pig eyeing us over the tops of the willows behind which we were skulking. It was a good 100 yards, offhand, and when that bullet tapped said game in the engine room the aforementioned animal merely rolled off its rock and landed kerplunk below. A little later in the day one of us smacked a gravid female in the nursery, and were we dumbfounded and surprised to learn that even though it was within a day or two of July 1, the young had not been born. We stopped shooting right then and there, believe me. Also, when we got to putting two and two together we decided that as a sporting proposition marmot shooting at high altitudes, at least, should not be done until late July or August.

Another shot with this same rifle that I won't soon forget was at a jackrabbit an even 200 yards off, hunched in the shade of a fence post. At the time I had a Winchester 5A scope on the rifle but was using the same 16 grain load, but the chamber had the regular cut; Risley recut the neck not long after this happened. Sitting down I placed the crosshairs on the jack and eased off the trigger. The little 60 grain bullet struck center and the animal simply wilted. This is the way anything up to good-sized dogs acted when hit by that open-point bullet. But it was landscape for a prairie dog, fact is, they blew up about as sickeningly as when hit by a .250-3000. This outfit, next to a .25-35 Winchester, was as near a work-a-day rifle as I have ever owned. Even with this load it did not seem to mess the meat nearly as bad as the Zipper or Swift, for instance. So far as we could tell the meat was normal in texture and not ruined for table use.

Now, with prairie dogs you have quite a different proposition than with chucks or marmots. That cast bullet, 67 grain Ideal, load that I gave you a bit ago, is withall the best prairie dog load I have ever used. It had around 1,600, or possibly a bit higher, velocity. The bullet killed well but did not tear the daylights out of the game. It punched a clean hole but seemed to deliver plenty of shock. The 77 grain Ideal bullet is also a dandy and shoots better in some rifles than the 67 grain weight. Both bullets may be cast from the old Ideal adjustable mold that, in fact, will cast that whole series of bullets merely by making the proper adjustment.

Prairie dogs are tough customers but not very large in size, weights will run from 1½ lbs. to 2½ lbs. actual weights, and average probably around 1¾ lbs. The largest measured specimen that I find in my old book weighed 2½ lbs., was 16 inches long, chest 9 inches, head 3½ inches long and 1⅜ inches wide and when sitting up, as they do, he was 10 inches high. I have never shot the "wheat squirrels" of the Northwest so do not know how they will compare in size; however, from my limited knowledge of them they are not as large or as tough as the prairie dog.

The late Paul Manley, who began to write a few stories for THE RIFLEMAN just before his passing, used to live in Idaho and later in Washington where he had great sport shooting these squirrels with a .32-20 Stevens Ideal No. 44 rifle. Later he obtained a Remington Hepburn rifle of the same caliber. He used black powder as I recall and all cast bullets, aperture rear and his own design front sight. The .32-20 is, of course, a very accurate cartridge when properly loaded and Manley did some splendid shooting on squirrels and hawks. He always planned on having a scope sight but so far as I know it never materialized, because—well you are not telling me that scope sights and latest model rifles do *not* go hand in hand with busting a farm home for a family out in the "far West."

My brother has used a .32-20 Winchester '92 rifle for years on everything from prairie dogs and rabbits to coyotes. For the most part he, too, used black-powder and cast bullets; of late he has used some Unique in place of the black. I killed many prairie dogs with my old .32-40 Stevens, generally used the regular 165 grain cast bullet with at least 40 grains of FG or FFG black powder. These old hunks of lead would sometimes ricochet to beat the band. I well remember one day up in Wyoming when I shot at a prairie dog with this particular rifle and load, and the old bullet went whining off over the hill. Now, in just about five minutes the iratest homesteading farmer I have ever seen came busting the wind right from the direction that bullet had taken. To date I have not gone to that hot place for which he said I was headed, but how that guy did cuss, wow! And I don't blame him. When one of those buzzing things come whizzing over a hill you never know just what is going to happen; such things have been known to bring the bull into full flow of milk, freeze the fire in the heating stove in July, make post holes out of a good well—you never can tell.

But my advice is for you to let someone else shoot long, hard cast bullets at prairie dogs, especially if there is a homesteader within ten miles. You won't have such exciting scenes, not often at least, when shooting light fast bullets, or even light weight, cast bullets at around 1,600 f.s. velocity provided that you use a little common sense and don't land the lead smack bang onto a hard, smooth, level piece of ground. Use your eyes and look beyond for every shot.

I imagine most of you fellows will be able to get some kind of smokeless powder to use, but at that you may have to use black and don't worry if you do. Black, properly loaded behind a properly lubricated cast bullet will do a nice job in the .25-20 SS for instance, or the .25-21, the .28-30, even the .25-35 and the .30-30 are said to make things interesting. Twenty years or more ago the late Chauncey Thomas worked up several very satisfactory black-powder loads for the .30-40. Let me mention one thing that may bother you when using black powder in long barrels. In low humidity areas black powder will cake in the barrel at the muzzle, or even for several inches at the muzzle. This may be overcome by using a few grains of smokeless on the primer; some such powder as duPont Shotgun, duPont Rifle No. 1, old Schuetzen or No. 80 will also do the trick. Use just enough to blow the barrel clean and no more. And of all things remember that no barrel will shoot worth a tinker's damn with cast bullets if the bullets are not of the right lead and tin mixture and are not properly lubricated. You will find formulas for lubricants in the old Ideal Handbooks, old Stevens, Winchester and the like catalogues, Gould's "Modern American Rifles" and in other books and catalogues of ye olden days. And for you .30 caliber fellows, years ago I shot hundreds of the .32-30, 100 and 115 grain soft point bullets in my old .303 Savage in front of 20 grains of Sharpshooter powder. This load shot very well and even though I have noticed where some "experts" say it can't be done, my reply is the same as that of the colored gentleman who remarked that, "I did done dood it."

Courtesy Nature Magazine

The hoary marmot takes nothing for granted in his mountains

And by now someone wants to know; "And what's the matter with the .22 Rim Fire?" There is nothing the matter with the .22 Rim Fire except that it is too weak in energy for the average untrained and careless shot to use. And right now, it seems to me that the patriotic thing for us to do is to leave the limited available supply of .22 Long Rifle ammo for use in training the combat forces and for small bore club range use. All of us who can reload will be helping a lot by letting our share of the Long Rifles go where they will do more good. In shooting prairie dogs and the like with the .22 Rim Fire, one should never use anything but the high speed hollow-point Long Rifle cartridge, if at all possible to get them. If you can't get hollow points, split the bullet at the tip in a cross with a good knife, then press the cuts tight. It probably helps accuracy not too much but we used to do this years ago and felt that we were helping the killing shock. Whether these points open up or not I don't know for sure, but anyway it made us feel better about it.

Not long ago I spent part of a sunny afternoon with my Stevens Model 47 rifle which is fitted with a Winchester 5A scope. As per custom I checked the sighting at 65 yards before showing myself and then for awhile about all I did was to crawl around trying to dodge the cactus. When I unexpectedly grabbed off a knee full of the pesky stuff, I spent several long minutes picking out the spines. Eventually I sighted one poodle and finally planted a hollow point in its ribs, but down the hole it went. And that's the part I don't like about using the .22. Of course the same thing can happen with any rifle.

Later, I set in to try a crack at some far-off specimens that were bobbing up and down and sitting straight as stakes. But 150 yards in a good stiff wind generally sees to it that you make no hits, that is, with a rimfire small bore. But my time presently came when the mayor of the town started cussing me from the very top of the town hall. By squirming around I finally got into my best Nip plugging, prone position and as the crosshairs settled on the old man's generator I slipped the trigger and into the air went the mayor. The hollow point had hit center, ripped through the chest, smashed the right forearm and went merrily on up the hill; the mayor after running about 30 feet rolled over very dead.

Such ammunition will kill if properly placed, but a hit behind the diaphragm on these tough little fellows is ten times worse than a hundred rank misses, it simply puts one more tortured innocent to your credit in the Great Spirit's little red book. It is very difficult, if not impossible for the majority, to surely place the shot at over 40 to 50 yards when using the average run of iron sighted rifles on this class of small game. In fact, good rifles, better scope sights, hollow point, high speed ammunition in the hands of trained riflemen is the only real answer to the .22 Rim Fire on game problem.

And now, one last word for you fellows who will be shooting chucks, jackrabbits, prairie dogs, wheat squirrels and the like in 1943. As you know, Davey Jones and his gang have had a whale of a tonnage of meat and other supplies donated by the grace of Adolph's wolf packs. And, as you know, meat for you and me is rationed not because they say that I am likely to get more than you, but, in fact, to insure a supply for the boys over there. Now, because of this situation, it is your responsibility to see to it that every pound of meat is brought home and used for food. My outfit has found out that prairie dog and marmot are darned good eating. And why shouldn't they be? They eat the cleanest of foods and live the cleanest of lives; are as near disease free as any mammals on earth.

The M-3 Sub-Machine Gun

A NEW AND BETTER sub-machine gun, weighing only eight pounds (less magazine) and so small that it can be taken down and the parts will fit in a soldier's pockets, is another menace for the Axis. It is known as the M3 sub-machine gun and weighs four pounds less than the Thompson sub-machine gun. Of .45 caliber, this new gun can be used for rapid fire, full automatic or as a single-shot weapon like the Garand and the carbine by simple manipulation of the trigger. Feed is by magazine which holds 30 rounds of ammunition. The ammunition is the standard caliber .45 ball cartridge.

The straight blowback principle is employed in the design of this gun. The rate of fire, when using it as a full automatic, is purposely held down to the comparatively slow rate of 450 rounds per minute. The bolt has a fixed firing pin and is so constructed that the excess energy from its forward movement is expended simultaneously with the explosion of the propellent charge in the cartridge. This feature is in large part responsible for the fact that the muzzle of this gun does not climb during rapid fire as do those of other comparable weapons. This greatly improves its accuracy.

It can be used either as a pistol or a gun for it has a skeleton wire stock that slides onto the gun when not in use as such. Field stripped for convenient stowing about the person, this weapon can be assembled in less than fifteen seconds. Field stripped it can be packed in a box 12¾ inches x 7¾ inches x 3⅜ inches. The barrel is only eight inches in length and no tools are necessary when assembling.

Design is such that all moving parts are fully enclosed so as to keep out dirt and water, and there are no projecting moving parts that might endanger the user. One of these enclosing parts covers the ejection port and acts as a safety when the gun is not in use. It is hinged for quick action and when snapped into the safety position, a lug locks the bolt in its forward position. In the cocked position this lug holds the bolt back off the sear, thereby holding both sear and trigger ineffective.

One of the greatest accomplishments in the design of this sub-machine gun comes from its simplicity of manufacture. There are only 25 component parts and 73 pieces (less magazine). All parts are metal and manufacture is principally from steel stampings.

Necessity is the mother of invention, and the necessity back of the development of the M3 sub-machine gun was a bottleneck in the production of the present types being produced by the Ordnance Department. The real bottleneck in this production schedule, as in many others, was machine tools. This situation became acute in July, 1942, when it became apparent that production capacity of the type required had run short for these machine tools were needed elsewhere. This new weapon takes sub-machine gun manufacture out of this class, and it can be contracted to plants with unlimited capacity. These are factories with power presses, of which there are many. Heretofore this type of plant has been hard put to find war items which they were in a position to make. Production by stamping is simple and fast.

Development efforts produced the first model within four months and this model was tested by Infantry, Armored Forces, Parachute Troops, Amphibious Troops and Tank Destroyer Commands. The consensus was that the M3 was superior in all respects to every comparable foreign weapon. Less than six months later the new sub-machine gun was in production in spite of the fact that it represents a complete and radical departure from all other models. In the past fifteen years the cost of machine guns has dropped from approximately $200 to something like $40, while the present M3 sub-machine gun is being manufactured for less than $20 and with a 50-percent cut in man-hours and a 25-percent reduction in machine-tool requirements.

THE STEN GUN

By CHARLES T. HAVEN

ONE OF THE WEIRDEST of recent arms developments is the British Sten Submachine Gun, or, as officially termed by the British, Machine Carbine. It looks like the result of the collaboration of Buck Rogers, Rube Goldberg and the late Mr. Woolworth, but according to the British it shoots. This weapon is characterized principally by its odd appearance, low cost and its extreme simplicity of manufacture. Since early last summer, the Sten Machine Carbine has been made in great quantities in England in three models, or "marks," to use the British terminology for their own ordnance materiel.

The Mark I most closely resembles a conventional rifle-type weapon in outline. It is thirty-five inches long and weighs eight pounds. It has a skeletonized metal stock of somewhere near conventional rifle type, and a fore-grip for the left hand extending straight down from about the level of the ejection port. It is fitted with a full length barrel housing or radiator sleeve and a combination flash hider and recoil compensator attached to the muzzle of the barrel. The barrel is short in relation to the over-all length of the weapon as is common in most submachine guns. It is less than ten inches in length.

British Official Photo

British parachute trooper, armed with Sten submachine gun, can go right into action before freeing chute if necessary

The Mark II is thirty inches long and weighs six and three-quarter pounds. It has a very simple skeleton stock formed of steel tubing with a flat crutch-like shoulder piece and a radiator sleeve covering only about two-thirds of the barrel. The front sight is situated on the radiator sleeve just above the breech of the barrel. The rear sight, as in the other two Marks, is a simple projection at the breech with a peep hole bored in it. The Mark II appears to be even weirder to handle than the Mark I. Otherwise most of its features are similar.

The Mark III is also thirty inches in length with a weight of six pounds and six ounces. The general appearance including the stock type is similar to Mark II, but it has a full length barrel housing or radiator sleeve with no flash hider or compensator.

All three marks take the same magazine which is a thirty-two shot, box magazine, holding the cartridges in a double column type of packing. The magazine is inserted in a magazine housing at the left side of the gun and is retained by a magazine latch. The magazine latch is situated at the rear of the magazine housing in such a position that it can be very readily depressed by the left thumb as the fingers of the left hand grasp the magazine to remove it in changing an empty magazine for a loaded one or in clearing a jam.

The Sten Gun is chambered for European type, 9mm. automatic pistol cartridges with straight rimless cases and round-nosed, metal-jacketed bullets, having muzzle velocities between 1100 and 1400 feet per second. Among these is the German Luger cartridge in all its forms.

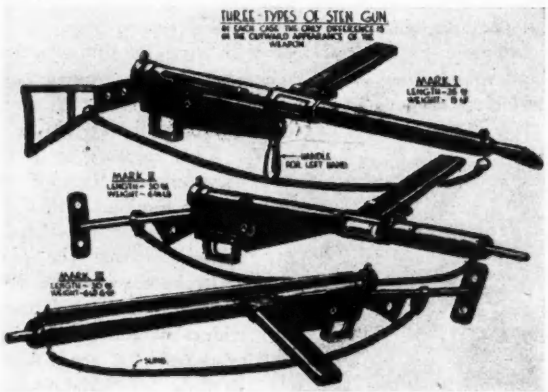
What appears to be a very unusual feature to anyone familiar with normal automatic arms functioning, is that the gun will take most of the different 9mm. pistol cartridges including both long types such as the Luger, Bayard, Steyr-Mannlicher and so forth and also the short 9mm. cartridges used in some of the Italian military pistols and in some of the Belgian Brownings.

There is a difference of an appreciable fraction of an inch in over-all length between these various types of 9mm. ammunition and according to our usual systems of chambering cartridges in automatic arms designed for straight-cased cartridges in this country (which is to rest the front end of the case against the shoulder of the chamber to provide support for the firing pin) it is difficult to understand just how this gun will handle cases that have considerable differences in length and still function satisfactorily. However, the statement is made that the gun will do so.

This may be accounted for by the system of engaging the extraction groove of the case by the face of the bolt. One description of the functioning of the gun states that "horns on the breechblock push the cartridges from under the magazine feed lips and push them into the breech." This may be a reference to a double extractor setup which retains control of the rimless cartridge at all times by locking securely into the extraction groove and holds it firmly enough so that even in a loose chamber, the firing pin meets sufficient resistance to discharge the primer. Of course, in a straight-cased cartridge of this type and of medium power in a weapon of the relative weight of the Sten Gun with its large and heavy breech-

block, the problems and dangers of excessive head space would be relatively insignificant.

The general functioning of all three marks of the Sten Gun is the same. The bolt is cocked open and a magazine is inserted in the magazine housing from the left side. A fire control button or "change lever" as the British call it, situated above and slightly in front of the trigger guard, gives full automatic fire when it is pushed in from right to left. Pushed through from left to right, it gives semi-automatic fire. When the trigger is pulled in either case, the bolt drives forward,



picks up a cartridge from the magazine, chambers it, fires it and is re-cocked by the recoil of the discharge.

The system is a straight blow-back with no breech-lock of any type. At full automatic fire the gun continues to function until the trigger is released or the magazine is empty. At semi-automatic fire, as in weapons of that type in this country, the trigger must be pulled for each shot, the bolt stopping cocked and open after each discharge. It also stops cocked and open after each burst of full automatic fire.

There is a safety notch in the path of the travel of the operating handle in the wall of the receiver. When the bolt is pulled back for cocking, it can be turned upward to lock the operating handle into this safety notch in the Mark II and the Mark III guns and downward to lock the handle into the notch in the Mark I gun.

The magazines are loaded with a magazine filler which is placed on the magazine with the butt end of the magazine against the body. The cartridges are put in the filler lever one at a time and the filler lever is pulled down to place them in the magazine.

The gun is so designed that if necessary it will operate satisfactorily with no oil of any sort applied to the moving parts, although the directions recommend that the gun be oiled when possible like any other firearm.

The cyclic rate of fire is between 500 and 550 shots per minute, the actual deliverable rate being limited only by the dexterity of the operator in changing magazines. With thirty-two shot magazines one man should be able to deliver between 150 and 200 shots per minute if this were necessary, although this type of fire would be most unusual for a submachine gun. Of course, there is no provision for cooling of the barrel other than by the natural radiation of the heat so that fire at this rate could not be maintained for more than 300 or 400 shots at most. It is probable, however, that, like most submachine and light machine guns, a fire of fifty to eighty shots per minute either semi-automatic or in short bursts could be maintained as long as ammunition held out without overheating beyond the functioning point.

The manufacture of the gun is on a very extensive, production-line basis and it has been stated that only about three of the parts with the exception of the barrel require any machine work at all. The rest of them are largely punch press stampings. The barrel is rifled and reasonable accuracy is claimed up to 200 yards, but it is designed primarily for close range fire.

Field stripping is very easily accomplished for the most part without tools. The Mark I only requires the use of a screw driver as the two screws holding the flash hider and compensator must be unscrewed before the gun can be completely disassembled.

Owing to the mass production methods, the total cost of the weapon is only about ten dollars. It is designed for the purpose of putting into the hands of the British Home Guards, regular army men and an assortment of people who are not particularly familiar with firearms, a cheap, readily manufacturable weapon, capable of using a variety of ammunition produced in great quantities.

As in the case of some weapons made in this country, there have been hints that these arms may be dropped in considerable quantities to the patriotic civilians in Nazi-occupied countries as part of a program of fostering internal rebellion in conjunction with a second-front.

It provides a weapon capable of deadly use with little training by people who are not primarily familiar with firearms. As the weapon is so simple, its stoppages are easily corrected usually by pulling the bolt handle, changing the magazines or hitting the gun a sharp blow.

Its weird appearance comes as a shock to anyone

British Official Photo

Simple, sturdy, especially designed for mass production, the Sten is produced at a rate of tens of thousands per week

familiar with conventional firearm design and would probably make the old gentlemen with gray beards who lovingly fashioned Kentucky rifles turn over in their graves. But the machine age seems to be crowding the conventional school of gun design out of the picture.

RANGE-FINDING

By MILTON M. IDZAL

(*Continued from June issue*)

AND NOW FOR OUR back yard range finder. The first thing we do is throw out everything we may have learned here except the bare essentials. If we don't, we won't be able to make it.

We know that we have to embody some means of observing the target from two different points simultaneously. We don't have to magnify the image, so we won't need a telescopic lens system. We are not going to take range at 60,000 yards, so our base length doesn't have to be very long. We will make it 12 inches. Errors at short distances are slight, so we don't need pentagonal prisms. We will use mirrors. We are not going to subject our instrument to the hazards of battle so we will use wood instead of metal which we can't get anyhow.

For our halving system—well here we are; I made mine of ¼ inch oak flooring using four pieces about 13 inches long. You do not have to be exact. This forms a long, narrow box approximately 2″ x 2″ x 13″. Near the bottom I made a ½ inch peep hole clear through from front to back. That's all. Just a plain peep hole with nothing in it.

The *left half* of this peep hole remains always just a plain unobstructed peep hole. The *right half* of this peep hole is interrupted by a small mirror placed before it at a 45 degree angle which brings into view another mirror placed near the top of the box similarly at about a 45 degree angle. This upper mirror is looking out of the top front aperture just like the little periscopes the kids make, except that this upper mirror is mounted on a pivot or axle which enables it to be swung a little about the plane of its surface in order to make a proper adjustment.

Thus in looking through the peep hole, or eyepiece, the left half of your view is as usual directly before your eye, while the right half of your view is through your mirror system which makes it from a point about 12 inches above your eye. There are your two observation points 12 inches apart. From the ten cent store you pick out the smoothest and least wavy vanity mirror you can find. Better buy a glass cutter, too. You make a clean, sharp cut on your mirror (for this will be your halving system) to get a piece about ½ inch wide and mount it on a wooden block at a 45 degree angle so that it obstructs only the right half of your lower peep hole.

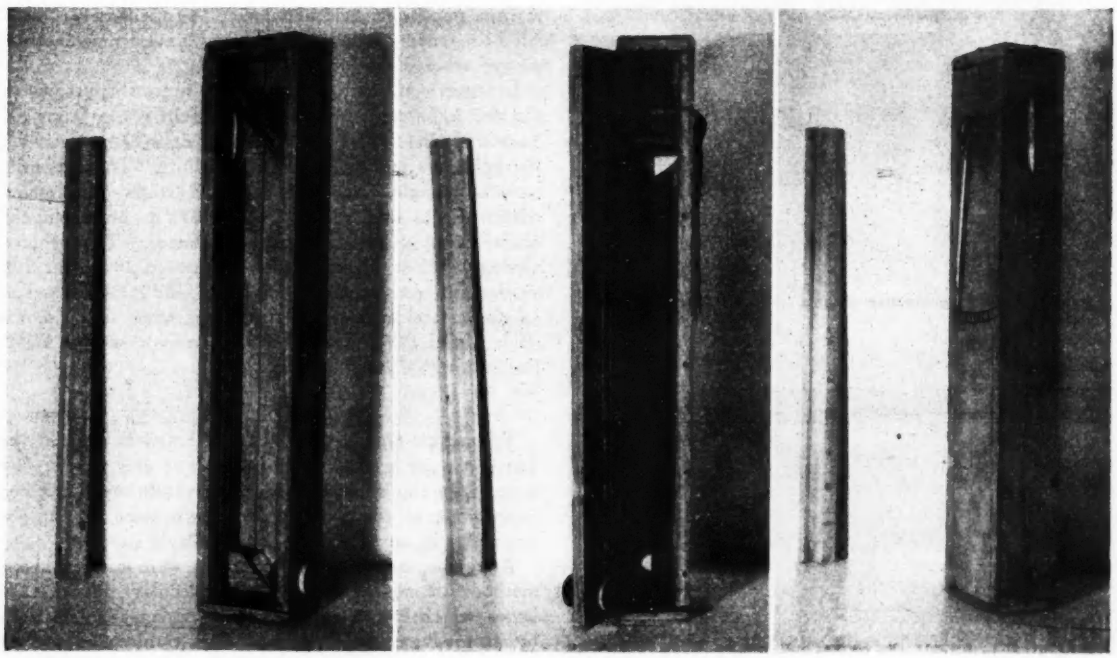
Do not use glue to fasten your mirrors in. Use something like duPont's clear liquid adhesive that comes in tubes to fasten the mirrors first to a wood backing.

Your upper mirror which looks out of its "right half" aperture is mounted on a thin piece of plywood which in turn is securely fastened to a light piece of curtain rod or curtain hook or similar metal which will be bent down one side to form a pointer. Your upper front aperture by the way, being six times as far from your eye as the lower front aperture, will have to be six times as large in order that the two halves of your view will show approximately the same size.

I stuck a piece of hard rubber tubing in the back end

(*Continued on page* 36)

The placement of the mirrors in the home-made range finder is shown below with the rubber tube in peep hole at the bottom— while at the extreme right is shown the front view with upper and lower half apertures and the range scale and pointer arm



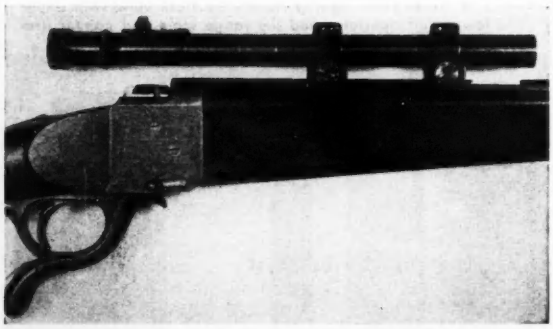
Scope Developments

By F. C. NESS

HARDLY anyone will argue the point that these are troublous times, times of emergency and dire necessity. And, necessity, the "mother of invention," urges lengthened strides in all fields of endeavor. All departments of engineering are swinging along at high speed. Our own field of small arms and ballistics is no exception. Take rifle scopes, for example; new developments are coming along all the time. Let's consider some of these up-to-the-minute developments.

The Redfield female-dovetail base of the Olympic front sight and the clamp rings of the Redfield scope mount cut off and then welded together make an excellent pair of light ring mounts for internally adjustable scopes, such as the Weaver. The idea of doing this originated with our good friend Gray. They will fit any male-dovetail base on the rifle. A pair is shown on the Farquharson rifle in the accompanying illustration. This rifle is equipped with an integral dovetail scope rib on its barrel breech. It is quite probable that after the war these mounts will be produced by the Redfield Gun Sight Corporation, but at the moment that firm is too busy with war work to answer any correspondence on the subject.

The Albree Twin mounts are similar, but they do not provide for convenient employment of standard dovetail bases. My own solution for the Weaver was to fit a pair of Parker-Hale ring mounts to Parker-Hale dovetail bases on the receiver of my Daly Hornet. This combination is also shown in an accompanying cut, mounting a 440 Weaver scope.



Redfield special combination mounts, standard dovetail bases

Parker-Hale mounts and bases—not for American bases

Another new mount is a quickly detachable spring-and-hook affair designed by Al Ljutic on the order of the Turner mount. It is even lighter and more compact. This, too, is shown here with a Zeiss Zielmar scope on a rifle remodeled by the same Al Ljutic.

A slip-on mount by M. L. Stith to fit the service rear sight base of the M-1903 Springfield was shown on page 17 of THE AMERICAN RIFLEMAN, May issue. The previous month (April, page 27) the new "dehorned" target mounts by Litschert for varmint rifles were pictured. Herewith is shown an interesting Litschert-Stith combination, consisting of a new, three base Stith mount and a Weaver scope converted to 10X by Litschert. In order to be adaptable to the Stith streamlined sleeve in front, the objective end must be smooth and unencumbered by the usual focusing collar and lock ring. The Stith design provides ideal support for the long scope, at both ends and also at a point between, which assures the shooter of scope protection and an unchanged zero in rough going.

The Stith mount and its wide base scope support has been thoroughly tried in rough country by guides, game control field men and hunters. One of the more convincing tests has been the use of these mounts with the large and heavy Zielsechs and Zielacht hunting scopes on such heavy recoil rifles as the .300 Magnum. Both of the Zeiss scopes shown here have been tested on big Magnum rifles under repeated firing without developing trouble in their Stith mounts. As a matter of interest, the Zielsechs is a 6X which weighs 14¾ ounces. It has an objective diameter of 42mm. and an exit pupil of 7mm. Its field of view is 21 feet at 100 yards. The bigger Zielacht, 8X, weighs 17¼ ounces and has a 52mm. objective with a 6.5mm. pupil. Its field of view at 100 yards is 16.2 feet. All Zeiss scopes, including these two biggest models, have an eye relief of 3¼ inches.

In American hunting scopes the nearest approach to the size and weight of the Zeiss Zielacht is the Davis 6X Sniper. It is 15¾ inches long and weighs 17 ounces with the light but strong Davis ring mounts. These mounts are also simple, thanks to internal scope adjustments within the ⅞ inch tube. It has a 35mm. objective, the ocular being nearly an inch in diameter. The field of view is listed as 24 feet, and we measured 20 feet at 100 yards with one sample. It had very good resolving power in the central area of the field. This scope sight, shown on a Model-1898 Mauser, is the product of the Davis Engineering Works.

* * * *

The article on Coated Lenses by Floyd E. Day in the June issue has been of much interest to this writer. We have given this subject considerable study and it seemed appropriate at this time to put down some of our observations in amplification of Mr. Day's story.

At the beginning of 1939 scientists were learning about methods of adding a film of molecular thickness to lenses which would improve their transmission of light by as much as 8 per cent.* This transparent surface

coating had to be no thicker than a quarter of a wave length of light (measured in millionths of an inch) in order to eliminate some of the inherent surface reflection of light rays. The optics of an instrument designed to transmit light absorb some light up to about 1 per cent, but they waste far more, or up to about 8 per cent, through surface reflection. The scientists learned of experiments with coated lenses in which practically all the light, except that absorbed, was transmitted, or from 98 to 99 per cent of the total received.

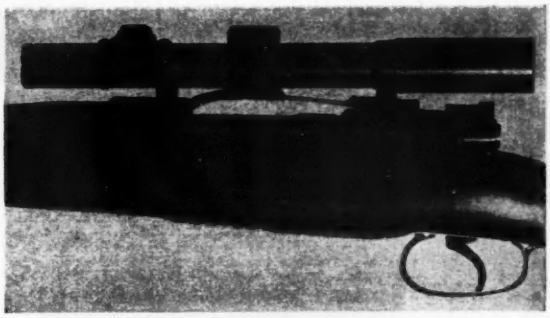
Our big optical companies and research laboratories were then working on the development of a commercially practical method of applying the new principle to their optics. The early samples which we tried that year had a sticky coating which could not be marketed. It could not be kept clear or wiped clean because lint and fibers stuck to it tenaciously. The sticky coating could be applied only to the inner and protected surfaces of the lenses and then, too, the instrument had to be kept sealed. This precluded a 100 per cent improvement in the transmission of light because the exposed outer surfaces of the objective and ocular lenses had to be left uncoated.

The first comparison test we made included completely coated optics, i.e., every optical surface of every lens in the system was coated. We also shifted eyepieces from the coated instruments to the uncoated ones and vice versa. For a real comparison test we started at 300 yards and later went to twice that range when outdoor light conditions permitted. The quality of the light and the interference quality or intensity of the heat waves (mirage) had a direct bearing on the results (relative resolution). We had to note conditions carefully so that comparisons could be fairly made, that is, under practically identical conditions of light quality and mirage intensity. We also had old original issue and new samples of spotting scopes and eyepieces for comparison. The new equipment, in some cases, showed a 100 per cent improvement in resolving power. For the comparison test, therefore, it was important to check the coated instruments against new instruments which had been carefully matched and mated before one of each pair was treated.

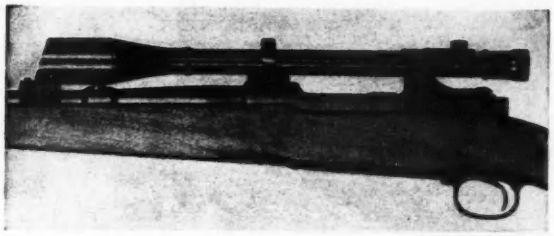
Under "fair" conditions of light and mirage at 300 yards an old 20X eyepiece in a given instrument resolved contrasty black-and-white spaces as small and as closely arranged as .200 inch to .250 inch (¼ inch). Under "good" conditions the same outfit resolved .150 inch. Under "better" conditions it resolved .125 inch. It was not tried under "ideal" conditions. Another bigger instrument was tried with the same eyepiece under "ideal" conditions and it resolved .135 inch. Under "good" conditions it resolved .125 inch. Under "fair" conditions it resolved .200 inch. Many other comparisons were made, but the above are typical and representative. With the first spotting scope an old 26X eyepiece was tried and it resolved .150 inch under "fair" conditions. Then a new 26X eyepiece was tried in it under the same conditions and it resolved .125 inch, which is 20 per cent better. With a third and completely coated scope and a coated 36.5X eyepiece the resolution was .125 inch under "good" conditions and only .065 inch under "ideal" conditions. This is about 1/16 inch and really remarkable resolution for 300 yards. Another comparison with

(*Continued on page 26*)

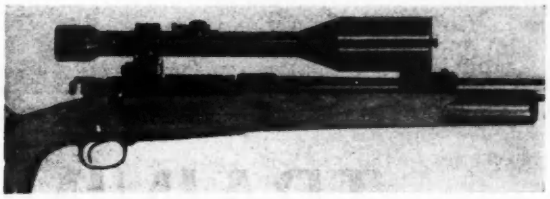
* Coated lenses were discussed in the Dope Bag, April, 1939, page 45.



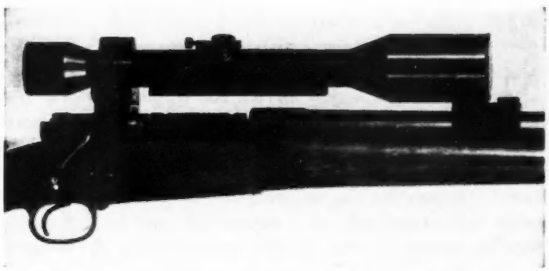
Special Snap-on Ljutic mount, Zeiss Zielmar, on Springfield



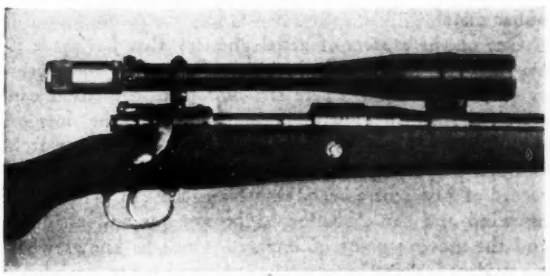
Stith 3-base mount, Litschert-Weaver scope for varmint rifles



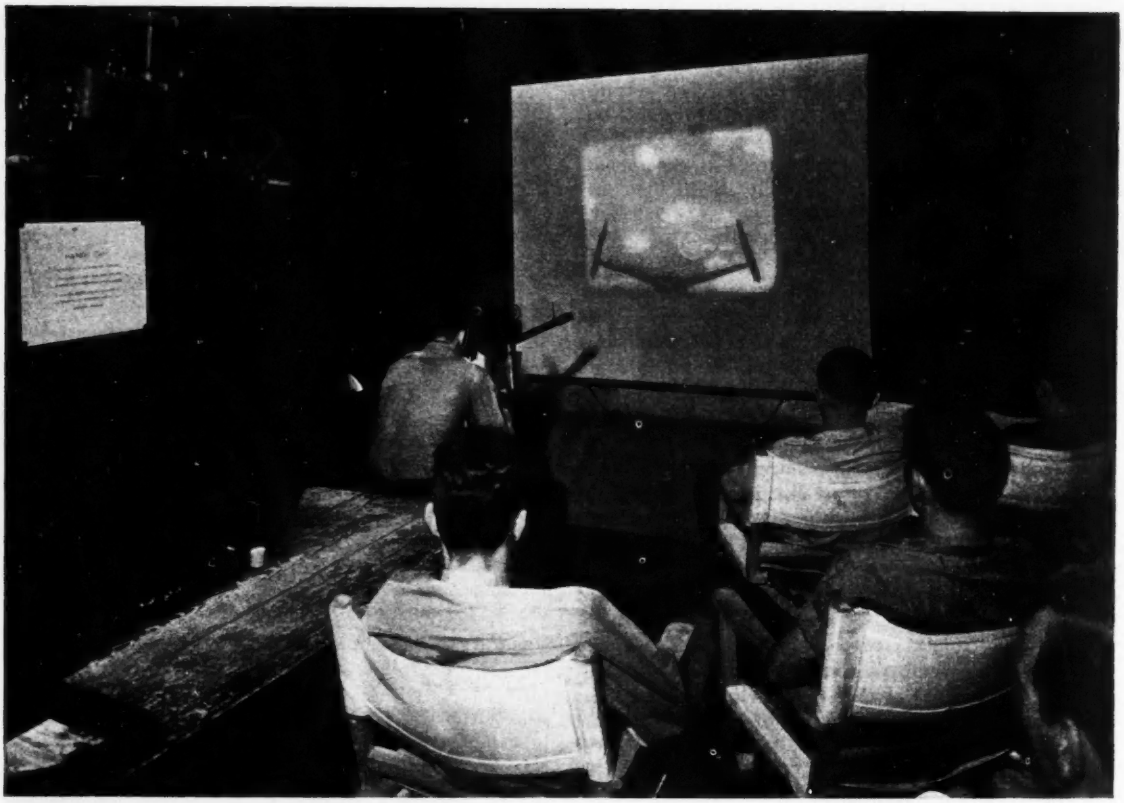
Zeiss 8X Zielacht scope in Stith mount withstood 6000 miles and 1000 rounds of .300 H & H Magnum without any zero loss



Zeiss 6X Zielsechs, Stith mounts, smaller than the Zielacht



Davis Sniper, ring mounts require internal scope adjustment



TRAINING MAGIC

By LT. STUART D. LUDLUM, USNR

MODERN MILITARY MAGIC is a conservative manner of describing the new device for training the Navy's aerial gunners. It is a contribution to the ever-increasing military marvels of this war made by the Special Devices Section of the Bureau of Naval Aeronautics of the U. S. Navy. It enables the ordinary instructor to do a thorough and expert job of teaching. It makes it possible for the instructor, the student and the class of "observing" students to see where go the *misses* as well as the hits. It keeps score. It reproduces almost every combat condition except, happily, the incoming bullets. And what's more, it does all this without expending powder, brass or bullet metal.

One of the aspects of aerial gunnery that has made it hard to teach has been the inability of either the instructor or student to know where the *misses* go. A coach can watch a rifleman closely, noting everything he does or doesn't do. When he "lets off," the coach can watch through a spotting scope and chart in the score book a record of just where every shot hits. He can make notes on wind and sun direction, sight settings and changes, and the moving point of impact. Once he knows what his student is doing incorrectly, it is not hard to straighten him out. In aerial gunnery it's different.

When you shoot at a sleeve target being towed through the sky, your hits leave holes in the cloth. But no one knows for sure where go the misses. Your instructor can't tell if you lead too much, or not enough or hold too high, or too low. Nor can you tell which holds or leads hit, which miss. Usually, you can learn more from your *misses* than you can from your bullseyes.

Tracer is not the answer. If you mistake an enemy bomber for a fighter and estimate the range at a thousand feet, it will really be nearer two thousand.

Tracer that may look as though it is curving back into the engine of the enemy aircraft really can be falling hundreds of feet short and away behind your target. Even though it may look as though you're stitching the bandit with armor-piercing and incendiary "fifties," you're only warming your guns with your *limited* supply of ammunition. You can't always believe your eyes when you try to read "tracer" in aerial gunnery.

In rifle and pistol shooting the problem is to get the bullet out of the barrel without jerking the sights out of line. In aerial gunnery that's not a problem. In the first place, when you are using a telescope or an illuminated ringsight, you have only one sight to worry about. And when you are using a free gun with a ring rear and

a bead front sight, the gun is mounted, and a jerk on the trigger isn't going to pull the sights out of line. The difficult part of aerial gunnery is knowing where to lead, where to point and shoot so that your bullets will collide with your target. This problem is complicated by the fact that the gun platform as well as the target is moving —and fast— and in a lot of different directions almost at once. Therefore, it is *apparent*, *relative* motion that counts in selecting a point of aim.

In a single engine plane, the "prop wash," or "slipstream," makes a bullet hop up when you shoot out one side, and drop when you shoot out the other. The actual and relative speeds of the planes, the velocity and direction of the wind, and the whole problem of angles of deflection can become very complex, but when the chips are down you have only split seconds in which to take action. The only thing you can worry about is the *apparent* motion of your target. Therefore, today it is *apparent* motion leading and shooting that's taught and practiced.

Here's what happens: In a room 20 x 10 x 10 feet high, you take your place in a two-gun power turret or you may man a free gun. On a 7 x 9 foot movie screen a few feet away you see the sky just as you would if you were the rear gunner in a dive or torpedo bomber, the top turret gunner in a Martin Mariner flying boat, or the nose gunner in a patrol plane. You see the scene just as you would if you were actually flying in combat, with your own wings and tail surfaces getting in your way every once in a while. Special films depict every known enemy attack technique. When the enemy introduces new tricks, new films are made.

When you take your place in the turret, other student gunners sit behind and to one side. Your instructor stands slightly to the rear. Behind you on a high stand two 16mm. movie projectors are threaded with film and ready to go. The lights go out. On the screen a title explains where you are—we'll say in the top turret of a Martin Mariner seaplane. It tells you that you are flying between 100 and 200 knots. As the titles fade out, the room is filled with the pulsating roar of the engines and the flailing propellers of your "plane."

Over the top of your illuminated ringsight you spot an enemy aircraft a couple thousand feet away and a thousand feet higher. It's up to you to recognize it, check its wing span (which you must know by heart for every plane you might possibly encounter) with your ringsight to see how much of the radius it fills, and—in a fraction of a second—have an accurate estimate of its range.

Your instructor gives you a couple of "observe" runs. This is what happens: As soon as the attacking plane gets within range of your guns, a ringsight appears on the screen at the correct point of aim. As the plane comes streaking through the sky at you, the projected ringsight holds the correct lead throughout the run. By superimposing the sight on your turret or gun over the correct point of aim as indicated on the screen and following it through the run a few times, you get the feel of leading by *apparent* motion. If you should fire a burst, your actual point of aim would be indicated on the screen by a spot of light.

This spot of light is the tip-off to your instructor, for it shows where you are aiming. In the second, the "familiarize" run, the correct point of aim does not appear on the screen unless you press the trigger. If you should shoot when the bandit is still out of range, you get the "bird" in the form of a gong. If you shoot when it is within range, the roar of your guns adds more din to the noise of the engines and the sound of the power turret. The correct point of aim appears on the screen. So does the spot of light which shows where you are aiming. In a glance your instructor can see where you are aiming . . . and where you ought to be aiming.

The third type of run is called the "teach-test" run. The correct point of aim appears on the screen only when the instructor presses a button. When you shoot, the noise of the guns bursts on you . . . the spot of light appears on the screen, indicating where you are actually holding . . . then your instructor presses the button for a flash to see where you ought to be aiming.

After each attack, the name of the attacking plane appears on the screen along with such data as its wing span and speed for the key to accurate gunnery is in *recognition*. When you're riding the rear seat of a hundred and fifty thousand dollar dive or torpedo bomber or a half million dollar patrol plane or four-engine bomber, the country has quite a stake in your ability to recognize planes . . . not just to tell friend from enemy . . . but so that your range estimations will be accurate and your shooting successful.

Let's climb in the turret and get a little practice. The title has told us we are in a Martin Mariner. The room is dark and vibrating with the throb of propellers and the roar of engines. You place your hands on the grips which control the turret. As soon as you grasp the grips and automatically press down the dead man switches, you feel the turret come to life. An enemy aircraft appears on the screen—about 2000 feet astern and about 1000 feet above you. You spot it and quickly, yet smoothly, twist your wrists and point up with them. Instantly the plexiglas turret turns in its track and the two Browning "fifties", fully loaded, swing up and come to bear on the target. By now you've identified the bandit as a Jap Zero which means a wing spread of about 35 feet. You check it against the radius of your ringsight, and almost instantly you know it is about 1200 feet away. You know how fast a Zero can dive on you and how sharply the pilot can turn without blacking out, but you're more interested in the *apparent* path your target is making through the sky. You lead him. He's still out of range. He banks behind one of your rudders and you watch for him to come out again. Here he is. You pick him up again and he's closing fast. The lead looks right. You press both triggers. (You have one under each trigger finger.) A line of tracer spouts and bends back like a hose when you swing it slowly across the lawn. The tracer looks like balls as it streaks through the sky. They seem to float above the bandit. You hold a little lower, trying hard to judge the lead correctly, and give it another burst . . . not more than a second or two at most. This time the tracer sweeps into the engine. . . . You swing the guns up fast as the Zero sweeps over you. . . .

In the air tracer seldom makes a straight arc. As you swing your guns to hold the lead and as your pilot swings your plane through evasive action, the stream of bullets sways and bends though the sky.

While we are indulging in those few thoughts about tracers, the recognition data on the screen confirms the fact that it was a Zero. And now another enemy ap-

pears . . . this time on the quarter. The tail surfaces swing by and we can see the tip of the wing. Smooth, fast action with your hands brings the guns to bear and you pick up the bandit in your ringsight. He's so far away you're not certain just what he is, but you are not going to let him get too close. So you give him a burst. The gong overrides the roar of the engines and, in no uncertain accents, tells you he is still out of range. He's coming fast but you are not certain what he is and, having been caught once, you are going to be sure he is within range before you go after him again.

But the instructor has switched to "observe", and before you realize it a ringsight appears on the screen, leading the plane with the correct point of aim. That means he is already within range and you are doing nothing about it. Quickly you get in a burst or two and as your attacker climbs out of the picture, the lights go on, the film stops and the engines cut out.

You messed up that second run simply because you failed to recognize and identify your attacker. . . . Mistakes like that in combat can be serious, fatal. But you learn quickly with the 3A-2 trainer. And men in combat areas keep refreshed, as plane-carrying ships and advance bases are equipped with these trainers for constant practice.

The Navy is using skeet, BB-shooting, compressed air machine guns . . . .30 caliber machine guns on moving targets on the ground and .50 caliber machine guns on sleeve targets towed in the air. And the 3A-2 trainer takes all this gun learning and puts it to the test while affording invaluable practice under simulated combat.

The precision with which the films are made is of utmost importance. Three and a half hours of complicated calculations must be solved for every second of screen time before the film ever goes into the camera. Exact scale models are used, for all types of enemy aircraft in workable condition are not readily available. Nothing is faked. Every attack is made in accordance with actual enemy tactics and within the operating limitations of both the attacking plane and the plane being attacked. Often more than one plane attacks you at the same time, each with its own problems.

With hundreds of these gunnery training devices in use constantly in all parts of the world, the Navy's rear seat gunners are creating a tradition of aerial marksmanship that may soon parallel the rifle mastery of the United States Marines.

Scope Developments

(*Continued from page* 23)

our regular spotting scope and a coated 13X eyepiece showed a resolution of .250 inch under "good" conditions and .150 inch under "better" conditions.

The completely coated scope under "fair" conditions resolved .125 inch with new (uncoated) 19.5X and 26X eyepieces, but its new uncoated mate with the same eyepieces could not equal that performance except under "good" conditions. These were the only direct comparisons which could be made out of thirty careful tests at 300 yards. There were too many variables because we had no control over light and mirage and could only make allowances for them by recording our results in groups segregated according to the prevailing conditions.

By picking an ideal day and using a favorable 600 yard range where our line of vision was about 100 feet above the ground, we managed to escape practically all interference from mirage. The light condition was uniform over the period of our test and it could best be described as "very good." Here at last we had an opportunity of making comparisons which would be fair, accurate and indicative. We proceeded to make the most of it, using three models of prismatic spotting scopes and two completely coated duplicates which had been matched to two of the uncoated scopes of the same model, together with an assortment of coated and uncoated eyepieces.

First the big objective model was tried. Uncoated it resolved .400 inch at 600 yards with the 20X eyepiece. With the coated 20X eyepiece the resolution improved to .250 inch. The coated scope with the uncoated eyepiece equalled this, and even with its coated eyepiece it did no better. We tried the coated 27X eyepiece in this same scope and it resolved .150 inch. Then we tried this eyepiece in the uncoated scope and the resolution was .200 inch. We did not have an uncoated 27X eyepiece available.

Then we tried the small objective model. Uncoated it resolved .200 inch with both 26X eyepieces, coated or uncoated. This was also true of the coated scope with both eyepieces and also with a coated 36.5X eyepiece. The coated lenses did not seem to improve the performance of this particular model as they had before in our preliminary tests with it over 300 yards. Why, I don't know.

This 600 yard test indicated that an appreciable improvement in resolving power could be had by using either the coated eyepiece or the coated scope in the big objective model, although this was not substantiated by the relative results obtained with the medium objective model. However, the latter scope had shown its coated form was at least .050 inch better with both 19.5X and 26X eyepieces at 300 yards under "fair" to "good" light conditions, although no better under "better" to "ideal" conditions with coated lenses.

About a year later a more practical method of coating lenses was developed by optical experts at Mount Wilson Observatory. In the fall of 1940, Ralph Waldo Miller intercepted my hunting jaunts by sending two Zeiss Zelvier scopes to me at Denver. Watt Redfield, Owen Tytegraff and the writer compared them by resting our arms over a car hood and studying the lights and shadows along Gilpin Street in fair evening light. Watt and I saw more detail and noticed a greater image brilliance with the coated sample, but Owen said he could detect no appreciable difference between them. We were sure there was a difference in favor of the coated sample but it was too slight to be apparent to Tytegraff, who is an experienced scope user. R. W. Miller quoted a lens coating service on hunting scopes at $20.00 and on camera lenses at $25.00 at the time.* The following year I had him overhaul my B. & M. 2¾X hunting scope which is still coated. I noticed a definite improvement in its optical performance after it had been coated.

Four years have now passed since we made our first tests with coated lenses, and it may be assumed that real progress in treating lenses has been made by this time. After the war we may look for improved optics, better optical instruments and, perhaps, with a fully developed coating of the lenses as well.

* This commercial service was announced in the Dope Bag, January, 1941, page 46.

The Home Workshop

Face Lifting the Lever-Actions

By CLYDE BAKER *

ALL SHOOTERS HAVE a very warm spot in their hearts for the grand old lever actions, particularly the very splendid Winchesters which have so well been brought up to date by that grand old company, to say nothing of the Marlin and Savage. The '99 Model Savage action is so designed as to lend itself readily to the idiosyncrasies of the stocker. The Marlin is generally comparable to the several Winchester lever actions, which are all so fundamentally similar that a description of operations on one of these should cover a wide range of activities.

Today's shooters are well sold on the high comb, set

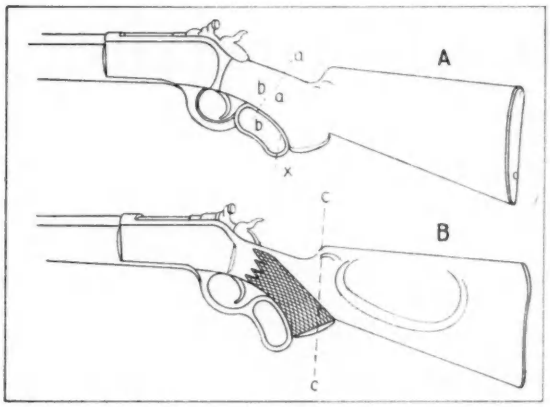


Fig. 1

well forward, the close, well curved pistol grip, the butt of substantial dimensions, and the cheek piece well-formed to bring the eye readily into the line of sights. The very cranky shooter who wishes to go a bit further than factory designers, realizes that the factories have done the best possible job in the face of existing production economies.

The Model '86 Winchester is a fair example. The New Haven lads renamed it the " '71," modernized the barrel, front and rear sights, magazine and forend, and would also have modernized the stock had they not been fearful of encroaching upon holy ground. Those abominably long tangs were deemed so needful that all they did was bend the lower one a trifle and leave the upper one as it was, resulting in practically no buttstock improvements.

Pretty much the same criticism must apply to the present Model 64 Deer Rifle, the Model 65, and other variations of the justly famous old model, . . . including today's versions of the very lovable Marlins. In all these splendid rifles, the manufacturers have completely ignored the need for certain simple modifications in the extreme after parts of the actions, which would have made truly modern stock design possible.

* Published posthumously.

Upper tangs are far, far, too long. So are lower tangs —and, still worse, on the shape and position of these latter, depend the shape of the pistol grip—a chummy little item which today's shooters have come to regard as of some trifling importance! Let's just see how easy it is to change all this, taking the good old '86 Winchester as a fair example, or if you insist the Model 71.

Figure 1-A shows quite clearly why it is difficult (impossible, rather) to stock this rifle correctly. But, saw off the two tangs on dotted lines a—a, and b—b, and a large portion of this handicap is instantly removed. Round up the two ends by careful filing. Of course, you've now played the devil with the mainspring, but forget this for the moment while consulting Figure 2.

Here we've filed up a neat block of cold rolled steel (from a piece of scrap) to fit between the tangs, and attached to them by a couple of husky 12-24 filister-head machine screws, counterbored into the tangs. If you want to make the screws of drill rod harden them at cherry red, quenching in water, then draw to dark blue and quench in linseed oil. If made of common machine steel, or if regular iron screws are used, harden by cyaniding for additional strength. Drill and tap a hole in center of block "B" to take a ¼—20 screw, or "stock bolt"; the *only* really proper way to attach a short buttstock to an action. Use an old Ballard or Sharps or '99 Model Savage stock bolt, or turn one up from cold rolled steel. Make the head ¾" inch diameter and ⅜" thick, and put a plain washer *and* a lock washer under the head. The new stock, so attached,

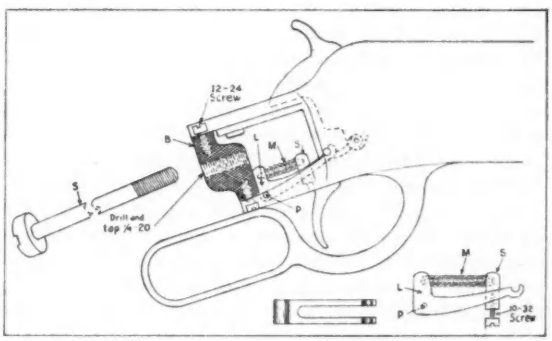


Fig. 2

will be as rigid and as conducive to accuracy as the preferred one-piece stock.

Yeah, boy, I hear you screamin' "But we ain't got no mainspring!" But we shall have, if you'll study Figure 2. First of all, we file up a short stud, and attach it to what's left of our lower tang by a 10-32 screw, just back of the trigger opening. This stud must be 100%

rigid, so brazing it to the tang is not to be despised, and will necessitate rebluing only the lower tang. We also file and saw to shape the forked "lifter," L, from a piece of good tool steel. This straddles the stud, S, and the hooked ends of the two legs engage the hammer stirrup. If made of tool steel the "lifter" should be hardened at cherry red, then drawn to brown verging into purple, and quenched in linseed oil. If made of cold-rolled it should be cyanided.

Shallow holes in upper ends of lifter and stud, form a resting place for a short piece of ⅛" drill rod which serves as an alligner for the mainspring, M.

The standard coiled mainspring for the old Model 1911 Colt Automatic Pistol gets the job done in a big way, or use any spring about this size and stiffness. This entire assembly should be put together on the lower tang when removed from action. A ⅛" pin, P, is used to hold the lifter in place, and a small hand vise compresses the spring during assembly.

With this part of the work completed and a roughly shaped stock blank held in position by the stock bolt, there's nothing in the way of reshaping the lever in any manner you fancy. This is best accomplished by cutting through it, bending to shape, and then welding the ends, as previously described elsewhere.

A careful comparison of "A" and "B," Figure 1, will show the worth-while possibilities of this simple alteration. The work of the stocker is unhampered by shape of either upper or lower tangs. The comb may be readily carried forward to its proper position over the center of the pistol grip cap (c—c, Figure 1) or raised as high as desired for any type of sights, including hunting scope. The grip may be curved as much or as little as desired.

One of the nicest features of this alteration is that, aside from the lever work, no heating, bending or refinishing is necessary. Once getting the idea, the ingenious gunmaker will be able to adapt this to other Winchester and Marlin models, and of course the '99 Model Savage, which needs little or no tang alteration.

Winchester M-70 Trigger Corrections

By A. H. BARR

IF YOU HAVE a Winchester Model-70 rifle with a fairly heavy trigger pull do not despair for it can be lightened without too much trouble. This rifle is equipped with a very fine trigger mechanism, but it may come from the factory with a pull of four to seven pounds. The reason for this is that like any other accurate mechanism it must be adjusted and tried with each individual rifle for a light, clean pull and this is not always permissible on a regular factory production basis. A custom-made job would be different.

The one unanswered question is just how light the M-70 trigger can be set and still be absolutely safe. One thing certain is that several of our Model-70 rifles with trigger pulls set at 2¼ pounds have proven to be safe for normal use during the past three or four years. This period included several big-game hunts, varmint and target shooting. Besides these rifles were tested for safety by sharp blows on the buttplate, and on the receiver tang with stock removed for the necessary adjustments. They hold also while slamming the bolt closed.

When making trigger adjustments the first thing that comes to mind for a lighter pull is polishing the sear parts, but this method was never attempted when working over at least nine M-70 triggers. All but one of them were set to hold only 2 to 2½ pounds merely by working on the adjustable trigger return spring, or the two lock nuts on the adjustment screw. The main trouble is a spring too long or too heavy, therefore, the simplest correction is to shorten this spring, one coil at a time, checking the weight of pull each time a coil is removed.

Another favored method to get the same result is to remove one of the lock nuts, as actually both of them are not absolutely necessary to lock the spring adjustment. But it is important that the one nut is turned up tightly against the projection of the trigger through which the screw passes. Usually this method gives results the first time, but should the pull still be too heavy the next thing is to remove a very short section of the spring. Sometimes the trigger may not hold two pounds with one nut removed. In this case take the second nut and dress it down to half the original thickness and try again. When the pull is almost right, but just a trifle light the spring can be stretched to give just the right resistance. Following this method it has been possible to set the pull on two or more rifles exactly alike, holding 2¼ pounds.

Before making these adjustments take all slack out of the trigger by turning the adjustment screw clockwise *with the bolt closed, and with the striker forward.* Then keep this same adjustment while finishing the job.

The only trigger which did not respond to this treatment had been worked on many times during the past four years, according to the owner, and still it was unsatisfactory. Even so, the usual corrections were made, but still we had a variable pull. Sometimes it would be too heavy or otherwise too light, depending on how the finger was placed on the trigger when applying pressure. Adding pressure on one edge resulted in a light pull, so the whole mechanism was taken apart and the trouble located.

Apparently there was a slight error in the size of the hole drilled in the trigger as it was larger in diameter than the two holes through the receiver for the cross pin. This allowed side play in the trigger, which proved to be the cause of the variable pull. To correct the trouble the holes in the receiver were enlarged to accept a new pin of the proper size for a snug fit in the trigger hole. This solved the problem.

Worth mentioning probably is the extremely hard and tough M-70 receiver, which ruined a good drill bit while merely removing several thousandths of hardened metal to enlarge the two holes.

KILLING POWER

By E. BADEN POWELL

PART III

FOR SIX YEARS the writer has assiduously analyzed all obtainable, credible data and made many tests with small caliber bullets at striking velocities up to 4,000 f.s. More recently he has been conducting tests and studies with larger and heavier bullets at these super striking velocities. This investigation is being continued in collaboration with other super velocity experimenters of wide experience.

Striking velocities of nearly 4,000 f.s. herald a new era of sporting arms and offer certain decided advantages to hunters and target-shooters. They introduce some new problems which have not yet been solved. For example, at velocities approaching 4,000 f.s. *"bullet-material"* penetrates solid objects such as hard bone, wood or steel to great depth and upon passing *through* scatters into a "million" pieces. The writer's favorite all around target and hunting arm for all vermin and non-dangerous game animals has been since its inception the .300 Holland and Holland Rifle. When the Model 70 was brought out for this cartridge, he switched to the Winchester.

Recently the writer had a rifle made up and chambered to his specifications using the .300 belted case enlarged to hold about 100 grains of powder. It is designated the .300 PMVF* and drives all .30 caliber bullets up to 220 grains weight, in soft point and metal-cased types, through 5/8 inch bullet-proof homogenized armor plate. This is the greatest thickness of this toughest of homogenized armor plate that has ever been penetrated by a shoulder arm so far as is known, with expanding bullets. Velocities run from 3,000 f.s. to 4,000 f.s. depending on bullet weight and barrel length. Bullets at lower velocities, are broken almost into dust upon striking this plate. In other words, a "hand full of mush" would probably penetrate a steel plate if it struck fast enough. And a charge of No. 10 bird shot would undoubtedly penetrate considerable steel at 4,000 f.s. It is no longer a "bullet" penetrating such a hard object, but "thousands of bullets," or *"bullet-material,"* that plows its way through. One can scarcely visualize what happens in the brain cavity, or chest cavity of an animal after a fair sized expanding bullet at 4,000 f.s. penetrates through thick head or shoulder bones, then "explodes."

At 2,700 f.s. striking velocity the 87 grain soft point, .250 Savage bullet usually fails to penetrate the heavy shoulder bones of a horse because it blows up on impact, but this same bullet shoots through half-inch armor plate at a striking velocity of 3,500 f.s., and has torn its way through several inches of head bone to kill dangerous animals at close range. We are led to conclude, then, that lighter bullets which have proven unreliable and inadequate killers due to bullet size and lack of penetration, at all previously attained velocities, may now be used to humanely kill certain heavier animals provided the bullets strike at not less than 3,500 f.s.

Table II (see page 34, AMERICAN RIFLEMAN, May 1943) is a chart of Comparable Analytical Records, observations and measurements. It throws much light on the controversies cited in this article and reveals facts that should forever still the unending arguments over some of these subjects. Cartridges Nos. 1 and 2 show that increasing a bullet's speed in that velocity bracket fails to increase the remaining velocity to any desirable extent at game shooting ranges. Buck shot shows still greater velocity loss, while small bird shot gains no practical killing power at the distance at which game is shot, by similar velocity increase.

Cartridges Nos. 3 to 10 inclusive reveal certain paradoxes. While resistance of the air is several times greater at black-powder velocities than at Magnum and Swift velocities, yet the slower moving, older slugs lose considerably less percentage of their original velocity. It appears that when we start these modern bullets at half their super speed they still lose velocity more rapidly than the older bullets, which is no improvement in bullet design to brag about. (Calculated by the use of Ingalls' tables.)

Cartridges Nos. 11 to 15 inclusive were the high velocity developments of a quarter century back. They show that the striking velocities of these "old fashioned" loads were as high or higher at 300 yards and beyond with much heavier bullets, than any of the present 4,000 f.s. highly vaunted supers, except for one or two Magnums that throw *heavy* bullets. Note superiority of .22 Savage over Swift at 1,500 f.s. velocity range. (Based on catalog and handbook figures.)

Cartridges Nos. 20 to 24 inclusive show how far some experiments have been carried in achieving super velocities. Solid bronze bullets were used to stand the gaff, but are not practical for target work because of poor density to buck air and wind. They are useless for game because they will not expand. (Figures on .22-348, .22-60 and .257 "MVF" furnished by Ralph Waldo Miller, based on his Cal-Tech chronograph experiments.)

The Powder column shows charges being fired in .22 caliber cartridges that a few months ago were considered maximum .30 caliber Magnum loads and in .30 caliber cartridges that were maximum powder charges for .50 caliber elephant guns. The Muzzle Energy column shows light weight .22 caliber bullets possessing Magnum muzzle energies, and .30 caliber bullets in the 6,000 foot-pounds class were only .50 caliber and larger-elephant guns heretofore registered.

The Projectile column lists two twists for the same cartridge and deals a blow to the spperiority claimed for faster bullet spin by the lower velocity and appreciably less penetration, hence killing power, of the same bullet

*Powell-Miller-Venturiied-Freebored Magnum on the .300 H. & H. Magnum case; also applied to other calibers of Miller-Magnums (MVF). The PMVF represents those MVF cases which have incorporated the Powell improvement called "Controlled Combustion Chambrage" usually involving less body taper, greater powder capacity and abrupt shoulders. R. W. Miller had previously developed the Venturi shoulder and the freeboring.

driven by the same charge of powder, from an otherwise identical gun. The Velocity and Distance columns prove that there is no "magic" that makes a light small caliber bullet the equal of a larger, heavier one for retaining its speed after it leaves the gun, and no "phenomena" that precludes the heavier, larger bullets having sufficient speed imparted to them by standard weight sporting arms to possess the same striking velocity *out where the game is hit*, and with no greater breech pressure.

The basic reason for seeking higher velocities is to increase the range of accuracy and killing power. The lighter bullets in any caliber defeat this objective. Viewed from any practical and factual standpoint their use is unwarranted for any purpose or reason, their inefficiency undesirable. The range at which they will kill the same sized animal as quickly as heavier bullets possessing the same muzzle energy is actually decreased for each increase in velocity with its attendant decrease of bullet weight in order to maintain the same breech pressure. The facts and figures on Table II cram this down our throats whether we like it or not. The 48 grain Swift bullet starts at 4,140 f.s. It is the best shaped factory .22 bullet made. It gets to 300 yards with 2,265 f.s. left and at 465 yards is down to 1,500 f.s.

The 70 grain .22 Savage bullet starts at only two-thirds the speed but gets out to 505 yards before taming down to 1,500 f.s. At this greater distance it has 40 per cent more energy left due to greater weight, and a longer bullet that doesn't need as tough a jacket to stand the terrific initial drive, and one that can be constructed to expand to a larger diameter to effect a larger, deeper wound due to its greater length. The shorter bullet's killing power is dependent upon its blowing up but its tougher jacket requires high striking velocity to accomplish this. Its poor ballistic efficiency diminishes its initial speed at an astonishingly high rate, and what it gains in accuracy due to trajectory it loses due to increased wind effect.

The efficiency of the 40 grain bullet is still worse; starting at 6,000* f.s. it gets out to only 550 yards before getting down to 1,500 f.s., compared with the .22 Savage starting at less than half the speed still going 1,500 f.s. at 505 yards, and possessing 70 per cent more energy at 550 yards.

The .25 caliber 87 grain bullet starting at 4,250 gets out to 910 yards before dropping to 1,500 f.s., but the 123 grain .25 caliber Newton gets out to 910 yards with 40 per cent more energy, starting at 75 per cent of the speed. The 120 grain .30 caliber bullet starting at 3,600 f.s. gets out to 525 yards before losing to 1,500 f.s., but the 180 grain bullet, starting 85 per cent as fast gets out to 615 yards to the same remaining velocity with 50 per cent more remaining energy.

Light bullets are humane killers on body shots only when their energy is transmitted through terrific displacement of fluid and other tissue. Hence all surrounding flesh is "bloodshot" rendering it unfit to eat, and valuable fur and hide is unnecessarily torn and mangled. On inedible, non-fur bearing vermin that, of course, doesn't matter. The minimum weight bullets that should be considered for any outdoor target or game shooting should be 65 grains in a .223 caliber, 100 grains in .257 caliber, 172 grains in .308 caliber, 250 grains in .357 caliber, 325 grains in .375 caliber and 570 grains in .458 caliber.

The higher the velocity and the smaller the bore, the faster the barrel erosion and the shorter the life of accuracy; and the considerably greater muzzle velocities required to impart similar striking velocities to smaller bullets reduces the accuracy life by several fold. Muzzle velocities in standard steel barrels above 4,250 f.s. limit accuracy to less than 1,000 rounds, unless metallurgy and lubrication engineering solve the problem. Barrel diameter controls the amount and speed of the gas that can pass through at the same pressure, and limits the amount of powder that can be efficiently combusted. The smaller the bore, the lighter the bullet, and the higher the velocity, the less efficiency of the powder.

One may wonder where the desire for higher velocity and more energy will end. With present forms of practical weight (10 pounds) hunting arms, maximum tolerable recoil is reached (not pressures, velocities, or bullet weight) when charges of 100 grains weight of modern propellants are used. One hundred grains of the most powerful modern rifle powder produces about 20,000 f.p. energy when it explodes. The most efficient system so far developed of propelling projectiles imparts from 25 to 40 per cent of the energy to the missile upon leaving the gun, depending upon its caliber. This would produce velocities as high as 6,000 f.s. for 65 grain bullets, 5,000 f.s. for 100 grain bullets, 4,500 f.s. for 130 grain bullets, 4,000 f.s. for 172 grain bullets, 3,500 f.s. for 250 grain bullets, 3,000 f.s. for 325 grain bullets and 2,500 f.s. for 570 grain bullets, with muzzle energies ranging from 5,000 to 8,000 f.p.

Considerable publicity, notoriety and speculation has attended the attempts of experimenters to develop higher velocities in rifle cartridges. Most of the efforts have had to resort to necking down larger caliber and larger capacity cartridge cases to utilize smaller diameter, lighter weight bullets. This necking down process sometimes changes the slope of the shoulder, in some instances inadvertently, in others purposely. In some cases the resulting cartridges display superior efficiencies to the original, while in others the opposite was true. Some gunsmiths claimed that abrupt shoulders handled certain powders and bullets best, others that long sloping shoulders had a definite bearing on erosion, others claimed differences in accuracy, and still others greater loading flexibility when their particular shoulder design was used. Shapes vary from almost taperless straight cylinder shells of most pistol and black-powder cartridges, through the various straight taper and bottle neck conventional cartridges most in use at the present time, to the few almost taperless body and abrupt shoulder "bottlenecks" of the English Rigby and Ralph Waldo Miller persuasion.

Modern rifle powders have a potential of about 1,500,000 foot pounds of energy per pound of powder combusted. This means that the 50 grains of powder in the .30-'06 load would impart more than 5,000 f.s. velocity and 10,000 f.p. energy to the 180 grain bullet if all the energy the powder possesses could be transmitted to the bullet, against only about 2,700 f.s. and 3,000 f.p. actually transmitted, or less than 30 per cent efficiency. The other 70 per cent is lost in the "work" of combustion itself, resistance of the bullet through inertia at the start and friction with the gun barrel and in "wave

*Highest m.v. from straight-groove barrel at C.T. laboratory. From normal bores highest m.v. is not over 4,500 f.s.

pressures," or surges of the combusting products and products of combustion, "rocketing" and rebounding back and forth between the base of the bullet and the base of the cartridge case, like water hammer in steam and gas pipes, at speeds approaching that of HE explosion or detonation waves, (15,000-20,000 f.s.) while the bullet is moving through the bore of the gun. Case shape or "chambrage" is the most important factor which controls the latter condition.

In long narrow chambers powder efficiency is much lower, where conditions for generating wave pressures are most favorable. More of the powder's potential is lost creating dangerously high pressure peaks, like the powder loss from "ping" or detonation knock in a gasoline engine. The average pressure, however, behind the bullet is relatively low, so the departing velocity is low. This is also the reason that modern actions have blown up with reduced loads. The primer ignites the loose powder at the rear and slams it against the bullet, from which it bounces back against the head of the bolt. This keeps up like a reciprocating piston or hammer, until the bullet is far enough up the bore to give the remaining weight of unburned powder and gases time to attain maximum pressure and velocity between bolt head and bullet base.

Twenty-five grains of material travelling at 15,000 f.s. velocity strikes a blow of 12,000 f.p., or about twice that of a .50 caliber 570 grain elephant rifle bullet at 2,200 f.s. striking velocity. That will not do the primer pocket or a bad brass case any real good. So better beware about the use of *safe* reduced loads, packed loosely in a large case, unless the cartridge case is of the correct design. Proper chambrage reduces wave pressures by preventing most of the powder from being blown up the bore, and steadies the flow of gas at more uniform pressure, like a "flow-bean" or orifice choke used in oil and gas wells to make the gas lift the oil steadily and prevent surging, which uncontrolled sometimes destroys the well. At times it bursts the highest pressure steel pipes and valves, unless "beaned" down.

Modern rifle powders burn in proportion to the pressure, faster at higher pressures and slower at lower pressures. This adds further to the surging as at the moment of peak wave pressure the powder burns faster, and during the low swing the powder burns slower. The proper scientifically constructed case controls and maintains uniform combustion and pressures to such a degree that not only a better efficiency is obtained from the same quantity of powder, but it makes it possible to further increase the velocity of the same weight bullet still more by being able to burn more powder in the same size case without increasing peak pressures. Better accuracy is attained because of less hammering of the bullet, more uniform muzzle velocities are obtained and less muzzle blast *variation* is present to affect the bullet at departure. The velocity of the same weight bullet in any bottle-neck cartridge can be increased from 10 to 15 per cent by changing to this chambrage, depending upon which cartridge is altered, at the same maximum pressures.

Conventional rifles have lands that extend back to the chamber. Some have a long "throat" or taper of the lands at the rear to allow long cylindrical bullets to enter the bore without undue resistance. Others are short "throated" and will accommodate short bullets only. When erosion begins to show wear in a rifle, it is in this "throat" where the lands and bore between the lands has increased in diameter. Accuracy usually falls off and soon the barrel is considered worn out. The forward 90 per cent of the barrel usually looks as good as new. This erosion is caused by the friction of the "unlubricated" jacketed bullet starting into the bore and by the particles of burning powder and hot gases rushing over the metal between the bullet and the bore before the bullet has entered far enough to seal the bore. The lands aggravate this condition materially, resisting the bullet until higher pressure can force it ahead, and requiring the bullet to travel farther before the grooves cut into the bullet at the lands, and cut wider by the gas leak, can be sealed.

Black-powder users found better accuracy by seating the comparatively soft lead bullets in the bore ahead of the cartridge case. But black-powder burns at the same rate regardless of whether in open air or under pressure. The result is a hard blow on the base of a soft bullet, resulting in much deformation, greater resistance and *tail deformation,* which affect accuracy greatly at black-powder velocities. Hence the lubricated soft bullet when supported by the steel barrel receives the blow on the base without deformation.

Modern rifle powders burn differently. The lower the pressures the slower they burn. Nevertheless, many believe and advocate seating the bullet as far out and into the lands as possible. This requires considerably higher pressures before the bullet can overcome the resistance of the lands. In the case of a hard, unlubricated, jacketed bullet, it means that when it does start, the powder is burning so much faster that the bullet is jammed into the twist with conditions contributing to bullet deformation, gas leakage, high erosion rate, and pressure peaks are reached before the bullet is under way long enough to benefit from them.

Exhaustive tests with many seating depths have convinced the writer that higher velocities and greater accuracy can be attained with both lead and jacketed bullets in all rifles *when using smokeless powder,* when the bullets are seated out only far enough to barely touch the rifling; and that highest velocities and accuracy are not possible without free-boring, which process entirely removes the lands for a certain distance in the throat, and a special taper made for the entering lands. The bullet seats into the bore and enters the lands with low frictional resistance. It is not prevented from sealing the bore by the lands; the low pressure does not force the powder to leak past the bullet and erode the throat; the bullet has momentum when it enters the tapered lands, yet is not going fast enough to have a tendency to strip; the powder burning is retarded in reaching peak pressure, and when it does the bullet is moving fast enough to derive more benefit from the push.

All of which means that the same charge of powder gives more power to the same weight bullet, hence powder combustion efficiency has been increased, and more powder can be burned in the same case to give still higher velocity. Less early pounding of the bullet improves accuracy very noticably. The increase in velocity by this method of freeboring runs from 5 per cent to 10 per cent depending on the cartridge, at the same maximum pressures. Some "worn out" rifles have been made to shoot better than when new by this expedient. *(To be continued.)*

BRIDGEPORT, CONN., JULY 1943

Rifle Remington

Possibles and Impossibles

by **FRANK J. KAHRS**

Well, the outdoor shooting season is here again. It sure was a long winter—but according to reports received, there was a lot of indoor shooting among the clubs, and good shooting too, I mean. At least 75 per cent of the indoor activities were devoted to training of those who felt they should prepare themselves to hit accurately what they might aim at in peace, war, and sport.

* * *

While indoor shooting is a lot of fun, there is nothing that takes the place of the great outdoors for those who like to shoot the rifle or pistol. It does something to a fellow when he gets outdoors of an evening or a Saturday afternoon, or all day Sunday, to breathe the fresh air and soak up the sunshine, especially after a cold, hard winter such as we have just had.

* * *

It is my humble opinion that this is going to be a very active outdoor season, despite the fact that most everybody is busy with his work and with working hours that may interfere with perfect attendance at the weekly shoots of the club.

Far be it from me to try and tell any club how to do this, but it seems to me that unless each member is approached in the right manner—stirred up, so to speak, to get out and warm up the old bull gun—he is liable to become more or less complacent about the whole thing and claim he is "too busy" and that he wants to "hang onto the little bit of ammunition he has" and all that.

It is just as important during the outdoor season—and perhaps more so than during the indoor season—to get the members out to help interest the new blood or to help as instructors.

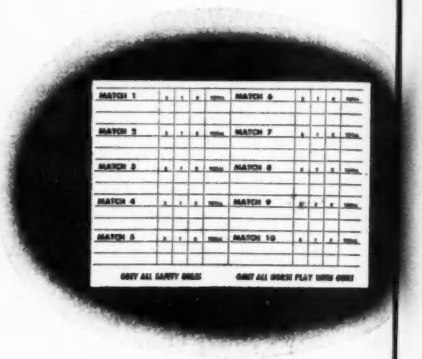
It is all right to make the appeal in the form of a notice to the members that a shoot is to be held the following Saturday or Sunday, and to please come out and shoot—but that is not enough. They have to have something to come out and shoot for.

* * *

I think the best inducement is to get together some merchandise and announce that there will be a merchandise shoot—the usual entry and all that sort of thing—and that there will be three classes—A, B, and C, for instance. This is important, because otherwise the more timid members will feel that they haven't a chance and that the older and more experienced shooters will clean up.

The executive officer of the club knows pretty well the relative ability of the members and can put them in their proper class. Anyhow, that's my best suggestion for starting the outdoor season right, and if it works—and I think it will—they will come out regularly for any chance to shoot for any prize, whether it is merchandise, medals, or cups. The main thing is to remember that the conditions under which the prizes are offered must take into consideration the real skill of each member and classify him according to his ability.

FREE! CONVENIENT POL SCORE CO

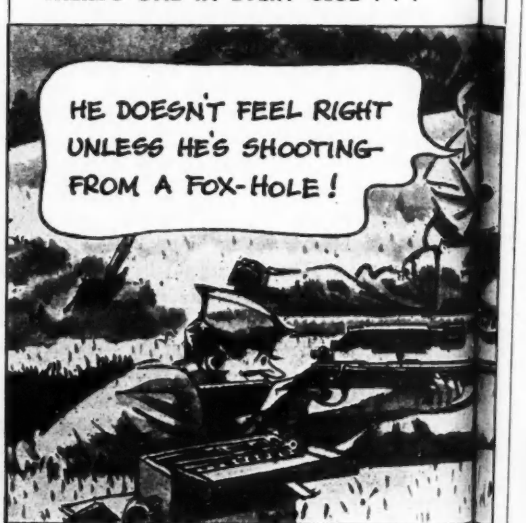


We have a supply of pistol shooters' sc on hand which are available on request.

These are cards of many uses. You a personal running record of your scores. an use them to keep progress records. Team will find them helpful in keeping a handy re di-vidual and team scores. They're useful lub shoots—one for each man. And in po es they're a convenient means of mailing the

To get your free supply of score cards ce *Officers' Section, Remington Arms Co c., Bridgeport, Conn.*

THERE'S ONE IN EVERY CLUB . . .



Remington News

A PAPER FOR PEOPLE WHO SHOOT

One of the bigger "little" things

War certainly isn't any fun, no matter *how* things are going. Maybe I feel it a bit deeper than some folks, but . . . my son is "somewhere in the Pacific."

However, one mighty comforting thought is this: Every day we're fighting, we're one day nearer what the statesmen call our "post-war objectives" . . . in other words, the right of decent, peaceful folks to live in a decent, peaceful way.

One right that *I* include is free and peaceful hunting. I happen to like to go out through fields with my dog and my gun . . . and I don't want any foreigner to say *verboten.* I like to see dawn and ducks out on the marshes, without anybody telling me . . . well, how *do* they say *verboten* in Japanese?

I suppose the statesmen would call America's heritage of free hunting one of the "little" things we are fighting for.

But to me . . . and to my son . . . it's one of the *bigger* little things!

* * *

Here at Remington we are doing everything in our power to speed peace through victory . . .

—*during 1942 Remington produced enough small arms ammunition to fire more than 300 times at every Axis soldier.*

—*during the last 7½ months of that year alone, Remington produced more small arms ammunition than the entire country produced during all four years of World War I.*

—*thousands upon thousands of military rifles were speeded to our armed forces all over the world.*

—*and Remington has received four Army-Navy "E's."*

The many thousands of us who are Remington are grateful that we are able to serve our country. And after the war is won, we will be glad to serve our sportsmen friends again with Remington's distinguished line of sporting rifles and shotguns, and such famous ammunition as Nitro Express shells, Kleanbore Hi-Speed .22's, and Core-Lokt big game bullets. *Remington Arms Company, Inc., Bridgeport, Conn.*

"Nitro Express," "Kleanbore," "Hi-Speed," and "Sportsman" are Reg. U. S. Pat. Off.; "Core-Lokt" is a trademark of Remington Arms Co., Inc.

Remington

DU PONT

Simplified Small Arms Ballistics

FOR THE SPORTSMAN AND SOLDIER

By the OLD COACH

Since its inception, the Old Coach's Corner has been given over to a review of shooting subjects for old and new shooter alike. One of the most important subjects is that of ballistics, an understanding of which, we must admit, is too often taken for granted. To provide the necessary background and to establish basic principles and fundamentals, the Old Coach undertakes this series; presented in simple terms, yet invaluable in review for all RIFLEMAN *readers.*

THE CARTRIDGE AND THE CHAMBER

AS WE HAVE ALREADY SAID, the modern small arms cartridge consists of the cartridge case, *into which is loaded:* (a) the bullet, (b) the powder, (c) the primer.

Cartridges are of two general types (a) rim-fire, (b) center-fire. The .22 short and .22 long rifle cartridges are now the most popular examples of rim-fire ammunition. Formerly there were many others, but the rim-fire cartridge is ballistically adapted only to low pressure, low velocity loads so the rim-fire cartridge has been superseded almost entirely by the center-fire type for modern use.

What we now call "the primer" in center-fire cartridges was, in muzzle-loading days, known as "the cap". It consists of a soft brass cup into which is pressed a pellet of explosive. In American-type primers, an "anvil" is then crimped into the primer cup to support the priming compound from the rear. In the European ("Berdan") type of cartridge case, the anvil for the primer is formed in the head of the cartridge case so the primer consists of only the cup and priming compound. Both American and Berdan primers are, of course, finished with a waterproofing compound.

In addition to the "rim-fire" and "center-fire" designation for cartridges, they are also classified as "rim-less" and as "rimmed" cartridges. *All* rim-fire cartridges are "rimmed". Center-fire cartridges may be either "rimmed" or "rimless". Whether a center-fire cartridge is "rimmed" or "rimless" affects the way it must be mechanically handled in the magazine of a repeating arm, but does not affect the potential *ballistics* of the cartridge. The matter is mentioned only to call attention to the fact that the ballistically *un*important terms "rimmed" and "rimless" are quite distinct from the ballistically *important* terms, "rim-fire" and "center-fire."

Another means of classifying cartridges is the designation by shape of the case. This has both mechanical and ballistic importance. Thus we have "straight case", "straight-taper case" and "bottle-neck case." *All* rim-fire cases are "straight cases", but center-fire cases are made in all three types, "straight", "straight-taper" and "bottle-neck".

From the *mechanical* standpoint, it is obviously easiest to manufacture the straight case and chamber while it is hardest to produce the bottle-necked cartridge and chamber. Tapered cases are mechanically the easiest to extract after firing so that most bottle-necked cases are tapered from base to shoulder. It is from the *ballistic* standpoint, however, that the difference between the straight (and straight-tapered) case and the bottle-necked case becomes most apparent and most important.

The fact that smokeless powder burns faster the higher the pressure under which it is ignited, i.e. the pressure "pyramids" instead of increasing in steady progression, is the principal reason that the shape of the cartridge case affects the potential ballistics of the cartridge.

To illustrate this point, let us consider a caliber .30 cartridge. A .30 caliber bullet loaded into a straight case will obviously require a case .30″ inside diameter to properly grip the bullet. If we decide that the loaded cartridge should not be more than three inches over-all length, we automatically limit the powder charge to whatever weight can be loaded into the straight case three inches long (minus the length of the bullet). If that amount of powder will not give us the velocity we want, we can increase the powder capacity of the case *slightly* by enlarging the base and giving the cartridge a straight taper from the enlarged base to the .30 caliber mouth of the shell. Such a change will, however, add but little to the powder capacity. We can easily *double* the capacity of the case by enlarging the body and necking it down to properly hold the .30 caliber bullet. Thus the bottle-necked cartridge provides greatly increased powder capacity and increased velocity in a cartridge of convenient length. This is the reason usually assigned by the layman for the use of bottle-necked cartridges. Actually, the bottle-necked cartridge provides much more important ballistic advantages than mere increased powder capacity. Consider the following facts:

(1) The primer must be so designed that it will have enough power (heat) to evenly ignite the powder but not so much power that the explosion of the primer will push the bullet out of the case and scatter the powder grains before they are ignited. This means that, in a straight case, we must use a powder that will ignite easily. Powders that ignite easily burn quickly, generate their maximum pressure quickly, and expel the bullet from the case with a sharp, hammer-like blow. If we try to increase our powder charge by *lengthening* the case, we run into trouble, because the powder in the forward part of the case is not evenly ignited—the primer ignites the powder in the rear of the case and the expanding gases push both the unignited powder and the bullet out of the case and down the barrel. Waste of powder and inaccuracy results. The straight-taper case presents the same inherent difficulties.

(2) Using the bottle-neck case, we have a radically different set of conditions. The powder charge is relatively short and thick. The primer ignites the center of the charge evenly throughout its length. This starts an intensely hot fire in the center of the charge, which immediately serves as "kindling" for the remainder of the

closely-packed powder grains. The sharp shoulders at the forward end of the case serve two important purposes. They set up a swirling motion in the expanding powder gases, turning them back into the blazing charge and helping to insure the complete combustion of all the powder. The resultant complete, even, burning insures improved accuracy. The shoulders also serve to delay the expansion of the neck of the case, thereby holding the bullet like a stopper in a bottle, until the pressures in the case have increased to a point where comparatively slow-to-ignite, slow-burning ("progressive") powders are burning properly. This type of powder has a pushing action on the bullet instead of the hammer-like blow of faster burning powders. This "push" is maintained for some distance down the barrel with the result that high velocities are obtained with relatively low breech pressures. This explains the statement "it is from the *ballistic* standpoint (rather than the *mechanical*) that the difference between the straight case and bottle-necked case becomes most important".

Few shooters realize that the cartridge *case* is not only a most important part of the cartridge, but is also *a vital part of the gun!* Get this picture clearly in mind and you will understand many of the things that can happen to a gun which are otherwise hard to understand. This little-realized fact also explains some of the seemingly odd or unnecessary cautions which the ballistician warns you about. Let us see how the cartridge case becomes a vital part of the gun—only to be promptly kicked out!

When the firing pin strikes the primer, the priming compound explodes and ignites the powder in the cartridge case. The powder begins to burn and give off a great volume of gas. This gas presses in all directions—and the harder it presses (i.e. the higher the pressures grow) the *faster* the powder burns. Hence the volume of gas *pyramids* rapidly. It does not grow by steady progression as would be the case if one grain of powder were ignited, then two grains, then three, then four, etc. It is more as though one grain started to burn, then three, then nine, then eighty-one, etc. Gradually the pressure expands the relatively soft walls of the cartridge case until they are *firmly sealed against the inside walls of the steel gun chamber* and the face of the breech block (bolt). This pressure starts to build up at the rear of the case (where the powder is first ignited) so that the neck of the case, holding the bullet, is the last to expand. As the neck of the case lets go its grip on the bullet, the pent-up gases rush out, white-hot, around the bullet and push it forward to a tight fit into the rifling, thence on through the bore. The pressure inside the cartridge case and throat of the chamber may have been anywhere from 10-12,000 pounds on every square inch of surface (as in the .22 long rifle rim-fire) up to 50-55,000 pounds per square inch as in our very carefully-built, high-velocity, high-pressure arms. People think of the *rifle* as safely holding this enormous pressure. But if you will carefully check back over the sequence of events from the time the firing pin ignites the primer until the bullet has been forced out of the barrel, it will dawn on you that the *cartridge case* actually sealed all that pressure inside the chamber of the gun! Of course, the steel walls of the chamber and the steel face of the bolt *supported* the cartridge case and enabled it to seal in the hot gas, but if any of that gas had been able to blast its way to the rear, down the sides of the cartridge case or through a split or tear in the case, there would have been *plenty* of trouble! Blown off extractor, blown out magazine, splintered stock, injured trigger hand, burned eyes—there are all kinds of trouble when the cartridge *case* fails to serve as a perfect gas seal. There are too many moving parts in the breech of a small arm to make it feasible to build a gas-tight closure in the gun itself. This is done at great expense in big guns using bag loading, but in small arms—and in smaller cannon using fixed and semi-fixed ammunition—the cartridge case serves as the "obturator" or gas-seal. So, for a brief but tremendously important fraction of time, the little expendable cartridge case holds in the grip of its clinging walls the whole fate of the weapon in which it is being fired and from which it will be immediately ejected and discarded.

As all shooters know, the "chamber" of a gun is the rearmost portion of the bore where it is enlarged to receive the cartridge. The forward portion of the chamber, which is tapered down to bore diameter in order to guide the bullet squarely into the rifling, is called the "throat" of the chamber. The operation of boring and finishing the chamber (called "chambering" the gun) is one of the most exacting in gun manufacture.

The chamber must (a) support the cartridge case so that it can successfully withstand the pressure of the powder gases as explained above; (b) hold the case so that the primer is firmly supported in the correct position to take the blow of the firing pin; (c) hold the cartridge so that when the breech is closed, the bullet will lie in the throat in line with the bore and just touching the rifling. If the cartridge was a precision-manufactured steel unit, it would be comparatively easy to build cartridge and chamber for an absolute fit—like a ground glass stopper in a bottle. But cartridges are quantity-production items and cartridge cases are drawn from brass or steel of entirely different characteristics than the steel in the gun barrel. Consequently, the chamber must be finished to dimensions which will allow for reasonable variations in the cartridge but without such *excess* of space as to improperly support the cartridge or improperly seat the bullet in the rifling.

It is obviously not possible to produce guns or ammunition at a marketable price that will be absolutely exact in dimensions. Bore and chamber, bullet and cartridge must be manufactured with measurements specifying permissible *tolerances*—that is with an allowable maximum and minimum as to size. Thus the allowable maximum of the chamber must be such that it will accept the cartridge having maximum tolerances, but it must not be so large that it will not safely support the pressure of gas within a cartridge having *minimum* dimensions. Nor must the minimum cartridge, lying in the bottom of the maximum chamber, be so far below the axis of the bore as to require the bullet to jump up into the rifling.

Of course, tolerance is the very opposite of accuracy, and accuracy in a rifle and its ammunition is the one most desired characteristic. Accordingly, some efforts have been made in the past to construct bore and bullet, and chamber and cartridge with no appreciable tolerances; that is within about .001″ to .0005″. Such design proved unsatisfactory because of cost, impossibility of production in quantity, and because the close fit would not work in greatly varying temperatures or in the presence of ordinary dust and dirt.

In considering the subject of chamber dimensions and tolerances, it is essential to bear in mind the effect on pressures resulting from changes in dimensions of the chamber as originally designed. Obviously, the designed tolerances give the cartridge case a certain amount of room to expand before the steel walls grip the case. This ability of the cartridge case to expand, particularly at the neck so as to let go its grip on the bullet, serves as a cushion and "safety valve" for the rapidly pyramiding pressures when the powder burns. This cushioning effect, this safety valve, is in operation in the original test guns when safe, standard loads are being worked out by the ballistician-designer. *Therefore, this particular gun and cartridge will only be safe to shoot so long as the designed tolerances remain in the chamber and throat.* If, in the effort to improve accuracy (or for any other reason), the chamber or throat is reduced in diameter so that there is no room for the expanding gases to be cushioned by expansion of the case—or if the "safety valve is tied down" by a tight chamber which prevents the neck of the case from expanding enough to let go its grip on the bullet—pressures will skyrocket and the gun will "blow up". A cartridge developing 42,000 pounds of pressure per square inch in a chamber allowing normal expansion will develop 100,000 pounds pressure *and more* when fired in a tight chamber which prevents the "cushion" and "safety valve" from working. Dirt or heavy oil in the chamber has the same effect as a tight chamber, because it prevents normal expansion of the cartridge. Heavy oil and grease have the additional gun-wrecking quality of preventing the case from sticking momentarily to the walls of the chamber so that the full thrust of the excessive pressures comes back against the face of the bolt or breech block. This is why shooters are warned to clean oil and grease out of the bore and chamber before firing a gun which has been standing idle in the gun cabinet.

"Headspace" is a term much used by ballisticians. Reduced to its simplest terms "headspace" means the distance that a cartridge case is permitted to stretch in length after the breech block has been closed and locked.

On every cartridge, there is a flange on the head of the case ("rimmed" cartridges) or a shoulder where the neck of the case joins the body ("rimless" cartridges) which, coming into contact with a "stop" in the chamber, prevents the cartridge from entering the chamber deeper than the correct distance. *"Headspace"* in the chamber of a gun using *rimmed* cartridges is the distance from the face of the breech block to the surface at rear of the chamber on which the forward surface of the rim of the cartridge case rests. Calibrated shims may be used to measure headspace in the chamber built for rimmed cases.

Headspace in a chamber for a *rimless* cartridge is measured as the distance from the front face of the breech block or bolt to some pre-determined point *on the shoulder of the chamber,* where it slopes down from the body of the case to the neck. Headspace of this kind cannot be measured with ordinary measuring devices, so a standard headspace gauge of hardened and seasoned steel is deposited in the gauge laboratory of the factory which first designed the cartridge. The working gauges used in manufacture are controlled in size by comparison with this standard.

Headspace in a chamber for rimless, straight-bodied cartridges such as the Caliber .45 Auto Colt cartridge, and the Caliber .30 Army Carbine, is measured from the square shoulder of the chamber just in rear of the throat to the face of the breech block.

As with other dimensions, there are certain allowable tolerances in headspace that must not be exceeded. If the headspace of the chamber is too small, the breech action cannot be properly closed on the cartridge.

If the headspace of the chamber is too great, (a) the cartridge may move forward slightly under the blow of the firing pin cushioning the blow on the primer and causing misfires; (b) the case walls will not be properly supported longitudinally against the pressure of the powder gases, so the case will stretch in the long chamber and may separate into two pieces, or the primer pocket may enlarge and the primer blow out, or the brass case may split, rupture, or fuse at its poorly supported base. The result in all these cases is to release the powder gases to the rear to wreck the breech action and perhaps seriously injure the shooter. (*Next month the discussion of headspace will be concluded and the sometimes peculiar designations of cartridges considered.*)

Range-Finding

(*Continued from page* 21)

peep hole to serve as an eyepiece. This is in far enough to just about hit the lower mirror which seems to enable me to hold in line better. You hold this contrivance vertically and sight through the bottom peep hole. When you look at any object with lateral lines such as a fence, half of the fence will be higher or lower than the other. Here is where you swing your upper mirror by means of the long pointer until your fence is all in one continuous piece. Or shall we say "coincidence."

Now if you have by some miracle placed your mirrors in absolute parallel plane with each other, that is, square with each other, both sides of your fence will be level and true with no overlapping or sections missing. But don't feel badly. Even big range finders do this, but they have adjusting devices to line them up. So, mount your mirrors with a little screw adjustment under each corner or be prepared to experiment with little toothpick wedges to level and true them up with each other.

The final task is to mark your range scale. I used a long pointer as is shown 5 inches in length. However, I found that this moves less than an inch in ranges from 10 to 100 yards. A vernier arrangement should be put on this. Use the "known range" method for marking your scale, just as they do on the big finders. Measure off 10 yards from your fence, carefully match your fence halves and mark your scale. Do the same at 15, 25, 35, 50 yards, etc. At great distances the motion of the mirror is so slight that you can no longer catch it.

If you want to make an instrument twice as long, you can range about twice as far. Fitting one of those little ½ inch Wollensak telescopes in the peep hole would again increase your range—if you can find one of them. They are about 3 inches long.

If you succeed in doing all this—including the telescope part of it—do you know where you will be? Right back in 1775. Sure enough, a fellow by the name of Magellan thought of it first.

POWDER SMOKE: READERS COMMENTS THE NEWS DESK

RE-LOADS . . .

WHY APOLOGIZE

Editor:

For quite a while now, I have seen little notices in THE RIFLEMAN, apol—apol—apol ——nuts, excusing yourselves if the magazine is a few days late. To those of us in the armed forces we don't mind that one bit. I, for at least one, am so glad to get my RIFLEMAN that if it were a month late it would still be news. You have no cause to feel apologetic about the matter. I have my family send my RIFLEMAN to me because it is much easier for them to keep up with me than for you to do that, but even here the fellows read and re-read my copy hardly waiting for me to finish. In fact, they don't, and I am sending each copy home for them to save and then after the war I can read them in peace.

You have been doing a wonderful job with the RIFLEMAN and it is getting better along every line. I want to thank you for this—my only tie with my memories as a civilian shooter.

Pvt. R. E. Linscott.

GUN TO ORDER

San Marino, California.

Editor:

Re: TWO GUNS WANTED—by Gilbert S. Watts (June).

Now we are getting some place! Put me down as finding no end of merit in the two guns suggested by Mr. Watts. Especially the over-and-under .22 Hornet and 20 bore in around 6½ lbs. weight. I'd say with barrel lengths of 24 inches and by all means with TWO triggers as suggested. Keep the overall length short for ease in carrying in ranch truck and in the saddle as well as when bucking heavy brush on foot. A stiff superaccurate rifle barrel is a "must" and these guns (if ever made) should be obtainable by competent gunsmiths for chambering for other .22 caliber cartridges such as Lovell R2, etc. And, if with two triggers, give us a *straight grip*, PLEASE! And, if possible, choice of rifle trigger location (either front or rear trigger as desired by the buyer). Finally, keep the retail under $50. Also, please fit it with man-size sling swivels for 1¼ inch sling.

Mahlon Frank.

COUNTER SALES AND ADS

Baltimore, Md.

Editor:

Now that you have discontinued the sale of THE AMERICAN RIFLEMAN over the counters of the better sporting goods stores, you will probably find any number of shooters like myself who did not renew their subscription or did not join in the first place because they could obtain their copies of THE RIFLEMAN from the newsstand at least *one* day and sometimes *several* days ahead of the regular members. In this way the non-members were able to snap up any choice buys in the Arms Chest before the regular members even received their copies of the ad.

Therefore, the announcement in this month's copy of THE RIFLEMAN that the public sale would be discontinued was a source of pleasure and I am glad to enclose my remittance for $5.00 for 2 years membership, hoping that when the magazine is again offered for public sale this situation will not occur again.

C. Buehler, Sr.

A STRIP TEASE

Ogdensburg, New Jersey.

Editor:

The article in the June RIFLEMAN on "Coated Lenses" is a classic example of "strip tease" journalism. It reveals just enough to whet your interest and curiosity but never does get down to the fundamentals of the subject. Everything it says can be summarized in the one sentence, "Coating lenses improves their optical qualities." It says *not one word* about what the coating process is, how it works, who does it or how much it costs. THESE are the things the average user of scope and binoculars wants to know. If that information is not available, *at least* the author should say so.

These remarks are not offered in any vindictive spirit and are not intended to belittle the efforts of author Floyd Day. They are simply to call attention to a deficiency which I feel characterizes a good many of the technical articles in the RIFLEMAN, namely, a lack of *complete* and *specific* information. Unless you are an "average shooter" as I am, you cannot realize how tantalizing and exasperating such articles as the one mentioned can be, by virtue of what they *do not* say.

Run this in your column and see if most members of the Association do not agree with me.

H. M. Aitken, M.D.

Here it is, Doctor, but before the predicted avalanche, look at the article "Scope Developments" (page 22 this issue), a follow-up to the Coated Lenses subject. Intended to accompany Floyd Day's article, it was crowded out in final make-up and held over for this issue. Short-handed, harassed RIFLEMAN *editors should have explained.*—ED.

A "BEST OFFER" AD

Staff Sergeant A. W. Johnson, 1435 Hyde St., San Francisco, Calif., is a newly-enrolled member of the N. R. A. He is also a fighting Marine. Upon his return to this country he noticed some of the "best offer" classified ads in THE RIFLEMAN, and in all sincerity sent us this copy.

"Marine will sell for best offer an excellent three-foot sword taken from Jap officer on Guadalcanal. Previous owner deceased."

Well, we had to explain to the "Sarge" our change in policy which prevents the publication of any so-called "auction" type ads in the Arms Chest, but offered to help him out with a news item. Here it is and it just seems to us some lively bidding might indicate our appreciation of a fellow who has eliminated one more sword-wielding Jap, plus sword, from the fight.

.45's WANTED

We have an appeal from a Marine who expects to go overseas within a few weeks asking us to locate a .45 service automatic from some NRA member. He is perfectly willing to buy the gun and promises to "let you know how many Japs I get with it." Here's a chance to get another gun in the fight. Just rush a note to NRA.

DONATIONS AND CAMPAIGNS

In a recent issue of THE AMERICAN RIFLEMAN and also the April Club Bulletin, reference was made to various donation and collection campaigns for knives, guns, salvaged brass and other items needed by the Army and Navy.

Regarding contributions for specific purposes we said: "Both the Army and the Treasury have stated that they much prefer to have people put this money into war bonds where it can be used as needed."

While this "preference" has been indicated in statements to us and also to the press from official sources within the Army and also the Treasury, we are well aware of many sincere efforts being carried on by various organizations and publications for specific donations to help along the war effort.

In this connection we quote a letter from the Under-Secretary of the Treasury, D. W. Bell, addressed to David M. Newell, Editor of *Field and Stream* magazine in reference to that magazine's "Give 'Em Guns" campaign for funds to purchase Garand rifles for our soldiers.

Mr. David M. Newell, Editor,
Field and Stream,
515 Madison Avenue,
New York, New York.

DEAR MR. NEWELL:

Reference is made to your letter of April 26, 1943, addressed to the Secretary, enclosing a notice which appeared in the Club Bulletin of the American Rifle Association for April, 1943, to the effect that the Treasury does not want donations for Garands or any other specific and restricted purpose.

In my letter to you of April 10, 1942, you were advised that under Title XI of the Second War Powers Act, 1942, the Treasury is authorized to accept on behalf of the United States donations of money or other property, real or personal, made on condition that they be used for particular war purposes.

You may be interested to know that when a donation is received for the purchase of a Garand rifle, a citation of the Secretary of the Treasury is transmitted to the donor, on which is shown, among other things, the serial number of the rifle purchased.

The Treasury will be glad to accept donations for specific war purposes, but cannot give official permission to any persons or organizations to solicit contributions for donation to the Government.

Very truly yours,

D. W. BELL,
Under-Secretary of the Treasury.

Ann Arbor High School girls team, popular entry in Detroit matches, and new team champions. (Below) Michigan State troops line up for Service and Headquarters Company registration

DETROIT'S "HEARST" TOURNEY

A sample of what American rifle clubs can do to promote marksmanship in this country was demonstrated May 29 and 30 at Detroit, when more than 1,600 men, women, boys and girls lined up for the Third Annual William Randolph Hearst Citizens' Marksmanship Tournament, sponsored by the Detroit Times. The program, contested over a 68 point indoor range, was held at Olympia, Detroit's sport palace.

Although the two-day tournament was primarily for graduates of the National Rifle Association's Small Arms Firing Schools conducted in Michigan by more than 75 clubs, events were also provided for top ranking rifle teams and individuals. To be eligible to enter the tournament, a competitor had to be a graduate of a Small Arms Firing School.

Most popular team event proved the Civilian Defense Open five-man race at 20 shots prone and 20 offhand, which was captured by the Detroit Sportsmen's Congress Minutemen Rifle and Pistol Club, a brand new member of the NRA and said to be one of the largest rifle clubs in the country. To be eligible to shoot in this event, members had to be connected with Michigan State Troops, Civil Air Patrol, Home Guards or Minutemen organizations.

The five-woman team event, which drew only five teams, went to the Fisher "Y" beauties with a mark of 790 x 1000.

Close to 50 boys' teams entered the junior event, 20 shots prone, high honors going to the City of Royal Oak "Yanks" with a team score of 960 x 1000.

Twenty-five teams entered the junior girls' event. Ann Arbor High School was the winner with 948 x 1000. St. Stephens High School of Port Huron took second honors with 872.

In the Men's Novice individual event of 20 shots prone more than 500 graduates of NRA schools were entered. Orval Opperthauser won with a perfect score of 200.

Among other events scheduled were the Michigan High School Junior team championship race for the state interscholastic title. Forty-eight teams from high schools throughout Michigan entered the prone, kneeling and standing match, with top honors going to the Royal Oak High School with a team mark of 1054. Ann Arbor High was second with 1028.

Other events and winners: Open five-man team, 20 shots prone, 20 offhand, Great Lakes Steel Bombers with a team total of 1897x2000; Women's Individual—Mrs. Olive Thom; Women's Novice match—Earlene Flory, over some 300 entries; Ann Arbor High School girls, first in the girls' team event with score of 1028.

Detroit and Michigan today is overwhelmingly "rifle shooting conscious", thanks to the rifle clubs of the state. Every one of them deserve a great deal of praise for the excellent work they have done in carrying on the program.—*Don Gillies.*

FLINT, MICHIGAN, MATCHES

When only 39 competitors registered for Flint Rifle and Pistol Club's Annual Spring Pistol Tournament on May 16, which is less than half of the usual attendance, gas rationing and lack of ammunition was considered the principal cause. The dopesters may now have to revise their statistics as the Annual Spring Small Bore, held on the following Sunday, registered 133, a new high which tops off the record of 128 established in 1942.

In the pistol matches Charles F. Logie of Detroit led the field in seven straight wins of the eight match program. Lester Thomas of River Rouge, Michigan, won the .45 National Match event.

Other class winners were: From Michigan: Joseph Nickoden, Lester Kendal, Rawson Weaver, Wilbur Beemer, Milo Cross, Alfred O. Toney, George Stauch, Harrison G. Schlupe, and Orley A. Boyd. From Ohio: J. L. O'Brien, W. A. Neldon, Albert D. Carper, and William Hubert. From Indiana, Kentucky and Pennsylvania in the order named were: Lester Higgins, Joe R. Anderson, Jr., and George G. Baltasser.

Leading the riflemen, Kay Stanton of Detroit won the Short Range Metallic Sights Match by out-ranking Al McLauchlan of the local club. Wayne Ferguson of Jackson took the Dewar Course and Long Range Metallic. F. P. Schimmel and Fred Friedman of Detroit, each came in for a share in winning the Long Range Any and Dewar Course Any, respectively, while Rudy F. Bowen of Brighton, ended up the program in taking the Long Range Any Sights Match.

MARINE MATCH

Marine instructors stationed at the Rifle Range Detachment, Quantico, Va., staged a match, May 24, using .38 and .45 caliber reloads made up by the Rifle Range Detachment personnel from components purchased through Detachment Recreation funds.

The .22 caliber five-man team N. M. C. event proved the boys were keeping their hand in, with Reeves posting a 292; Brown, 286; Swanson, 285; Shapiro, 274; and R. F. Rice, 267, for a Marine number one team total of 1404 over Sparrows Point number one team's 1332. The same Marines totaled 1389 in the five-man team N. M. C. .38 caliber. With the .45's the same squad shot a team score of 1401, Reeves again high man with a 293. Six matches were fired in all, for the most of them, a six-team entry.

COMING EVENTS

All events listed below are Registered Class C matches.

California, July 4—Far West Small Bore, Glendale. J. E. Cornell, 662 Arden Ave., Glendale.

Florida, July 4—1st Floridian Pistol Club, Tampa. Verne Klintworth, 6 Petteway Bldg., Tampa.

Illinois, July 18—Tri-County Pistol & Rev. League, Lincolnwood. Chester Gould, 7441 Madison St., Forest Park.

August 15—Tri-County Pistol & Rev. League, Lincolnwood. Chester Gould, 7441 Madison St., Forest Park.

September 19—Tri-County Pistol & Rev. League, Lincolnwood. Chester Gould, 7441 Madison St., Forest Park.

Iowa, July 18—Iowa State Ass'n Small Bore, Waterloo. Ralph M. Travis, 314 Insurance Bldg., Waterloo.

Michigan, July 25—Small Bore Tour., Flint. A. J. Marxhausen, 2521 Thomas St., Flint.

August 8, Pistol Tour., Flint. A. J. Marxhausen, 2521 Thomas St., Flint.

Pennsylvania, July 11—Sportsmen's Pistol Tour., Broomall. Raymond G. Heron, Broomall.

West Virginia, September 5—6th Annual Mountain State Pistol, Fairmont. A. M. Springer, P. O. Box 204, Fairmont.

James A. Drain

The distinguished career of James A. Drain, which included a Presidency of the National Rifle Association in one of its critical periods, Presidency of the National Guard Association, National Commander of the American Legion and of late years, Assistant Federal Security Administrator, came to an end on Decoration Day, May 30. General Drain died at the age of 72 at Mount Alto Veteran's Hospital after a brief illness.

General Drain, to older NRA members, is associated with a period of rifle shooting history which leads directly to the resurgence of interest immediately after his connection with the game. He became interested in National Guard activities while practicing law around Spokane, Wash. In 1900 he became Adjutant General of Washington and held that office until 1906 when he moved to New York. A close friend of President Theodore Roosevelt, he authored the National Guard Act of 1906 and secured the President's help in the passage of this act.

He entered the publishing field upon moving to New York and became owner of one of THE AMERICAN RIFLEMAN'S predecessors, *Shooting and Fishing*. He changed this to *Arms and the Man* to live up to the purpose of the publication,—a magazine of National Guard and National Rifle Association activities in which he was so much interested.

General Drain became President of the NRA when it was only a one room office, occupied by the secretary, located in Passaic, N. J. He moved the offices to 297 Broadway, New York City, adjoining those of *Arms and the Man*. Within a year, the activities and influence of the Association as regards legislative proposals, governmental endorsement of rifle practice, National Matches and the like, were such that it became necessary to set up Washington offices in order to work more closely with the Federal agencies that were helping along the revival of shooting interest.

General Drain had the vision, the courage and the energy to plunge into this important work and carry forward the activities of the National Rifle Association, until it was recognized and enthusiastically supported by men of highest standing in government circles. The imposing list of Supreme Court Justices, Secretaries of the President's Cabinet, two Presidents, all of whom became Life Members of the Association during his Presidency, was due to the magnetic personality of General Drain and the program he represented.

When America was faced with the possibility of involvement in World War I, General Drain realized he would have a definite military role to fill. It, therefore, became necessary for him to dispose of his publishing interests. He offered the magazine he had so carefully built into a potent editorial force for National Defense, to the National Rifle Association, where he felt it belonged. This became, a few years later, THE AMERICAN RIFLEMAN, official publication of the National Rifle Association.

Returning from the war, in 1919, with the Distinguished Service Medal, the Legion of Honor and the Cross of the King of Italy, Colonel Drain, who had lost his right hand in a hunting accident in 1900, devoted himself to the problems of the disabled.

He was active in the American Legion and was elected National Commander, serving from September, 1924, to October, 1925.

WAR SERVICE RECORD

When a certain Engineer Battalion moved into the vicinity of Trona, Cal., recently, looking for a place to shoot, they found the Searles Lake Rifle Club ready and waiting. They got their place to shoot and more.

Col. Yaden told Club Secretary Myron W. Colony that the soldiers were short of time and instructors but needed basic rifle training badly. Colony promptly rounded up his crew and proposed a program which was undertaken to the delight of the Engineers and to the members of the Club who were in a position to participate.

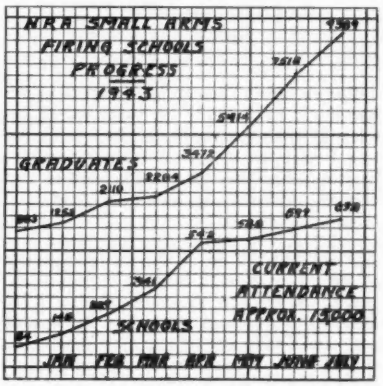
The Club's .30 caliber range was immediately turned over to the Army for the duration of their stay for instruction under their own officers and non-coms. The Running Deer was then turned into a tank target and the firing point moved back to 500 yards.

The indoor small bore range of the Club was turned into a basic rifle training school under the Club's civilian instructors four hours every evening from 6:00 P. M. to 10:00. The Army provided ammunition and rifles and the Club set up the range, targets and instructors. As it turned out the Club members also had to dig out their own rifles, too, because many of the Army's Winchester 75s were in bad shape.

During the five weeks, twelve basic rifle classes of four hours each were passed through the works. 121 men of the Battalion were given basic training by eleven Club instructors. Some of these soldiers had never fired a rifle before. The instruction included all four shooting positions and rapid fire.

Of the 121 men who took this course of sprouts 80 were qualified as "marksmen" or better.

When these men went to the .30 caliber range *every man* who qualified did so with the heavier rifles.



H. P. Rokenford

H. P. Rokenford, a sincere advocate of rifle training for all Americans and Life Member of the NRA since 1920, died May 6 at the age of 62. He and five other neighboring farmer boys started rifle shooting in 1911 and organized the present Roberts Island Rifle Club (Calif.). His expert rifle shooting helped the club gain its prominence in the rifle shooting world. He was an exceptionally good offhand shot.

He gave freely of his time and finances toward developing the local club for the 32 years of the club's existence, donating the use of the land for the club house and indoor range as well as the 200 yard range.

The rifle shooting game has lost one of its best friends and he certainly will be missed by all who had the good fortune to know him.—*C. G. Barthold.*

NEW PROCUREMENT PLAN FOR AMMUNITION

With the issuance of War Production Board Limitation Order L-286, dated May 1, 1943, we believe the ammunition requirements of affiliated clubs for pre-induction training can be taken care of satisfactorily through established governmental procurement channels. The Association feels, therefore, that no useful purpose can be served by continuing the temporary procurement plan which enabled clubs to buy ammunition through the Association during the months governmental agencies were formulating a uniform method of distribution.

The Limitation order referred to restricts the sale of ammunition to groups specifically recognized by the War Production Board and provides for distribution of the cartridges through normal jobber or retailer channels. Rifle clubs are restricted as in the past to the purchase of .22 ammunition, after W.P.B. approval in each instance. A special bulletin recently mailed to N.R.A. clubs outlines the procedure to be followed in obtaining the required approval.

While the Association no longer has any .22 ammunition for sale to affiliated clubs we still maintain a liaison with the War Production Board, as we are frequently called upon by the Board for information and technical advice with respect to firearms and ammunition. If, therefore, any of our clubs experience any difficulty or abnormal delay incident to the procurement of ammunition, under the new plan as outlined, we are in a position to assist such clubs and we shall, of course, be glad to do so.

STOLEN GUNS

Model 70, .30-'06, stolen on trip between Seattle and Seward, serial number 33162. Please notify C. G. White, 2860 Brooks Ave., Salem, Oregon.

DOPE BAG ☆ ☆ ☆ Conducted by F. C. NESS

THIS MONTH:

Barrel Life · .220 Swift · .220 Arrow and .22 Varminter · Junior Varminter and Bluestreak · .50 MG Experiment · Ball Powder · Steel Cases · Letters · Trade Dope.

Barrel Life. One of the last letters the late E. G. Little wrote me contained an interesting comment on barrel life. Referring to a Remington 30-S in .257 Roberts caliber, he said it had the best wearing bore he had ever encountered. It had been fired 1000 times and was still perfect. Then he rechambered it to the .25 Magnum and it was still perfect after an additional 1000 rounds of these high-velocity loads.

With much the same barrel (probably identical) I averaged more than 200 rounds per week with the milder .25 Remington rimless. I fired less than 1000 factory loads, but totaled at least 25,000 rounds, which is a lot of shooting, at the rate of 10,000 annually. I finally had to replace that barrel; which I did, and shot it very little because I acquired a second M-30-S bolt-action in .25 Remington caliber. After a couple hundred rounds the first replaced one was converted to 250 Savage caliber, but it did not do as well with its 10-inch twist. Later it became a .257 Roberts, but a very ordinary one which I soon let go in a trade. Altogether I fired less than a thousand rounds in the replacement barrel, but the first one lost its original accuracy after 10,000 rounds and at some indefinite number before 15,000 rounds had been fired through it.

From A. L. Lewis of Montgomery, Alabama, comes some interesting dope on the life of his Stevens Hornet barrel. It lasted for about 10,000 rounds. He used graphite wads for the first half of these handloads in this M-417½ Steven's rifle. At about 5,000 rounds the land just ahead of the throat disappeared and the first shot, with wads in his Hornet loads, would send the bullet wild from a cold barrel. After 8,000 rounds the erosion had extended 8 inches forward of the breech. Then Lewis sized his M. C. bullets to .2225 inch, cut his charge ½ grain and went back to wads. He got fine accuracy for an additional 2,000 rounds or until the erosion extended a foot forward of the breech. He used all jacketed bullets, in variety, including the 48-grain.

A. R. Weeks of Tillsonburg, Ontario, does a lot of shooting with his 2-R Lovell. Besides his test groups on paper targets he had killed 604 crows with it at the end of 1941. In that year he also killed 292 chucks. Last year (1942) he killed 745 crows and 185 chucks. The point is that, after he had worn out his first barrel, he had it relined by C. C. Johnson and kept an accurate record of every shot fired through the liner.

After 4600 rounds, all shooting followed by careful cleaning and "Rigging", the bullets had to be seated out 1/16 inch to reach the throat, and the bore had tiny gouges over its entire length. The load was 16 grains No. 4227 behind the 45-grain 8-S bullet. A bench-rest test showed good accuracy up to 4600 rounds. Rounds 4586 to 4595 were tried at 200 yards with the 47-grain 8-S bullet, same powder load. The ten-shot group was less than 2 inches in extreme spread. Rounds 4596 to 4605 were tried with the old 45-grain load and did still better, or less than 1¾ inches spread.

An odd thing about this bore is that it gave up the ghost all at once, after 6700 rounds had been fired through it. There was no gradual falling off of accuracy. Rounds 6550 to 6559 did better than before, with all ten inside a 1¼-inch circle at 200 yards. The others were measured center to center, this one being a bullet-diameter smaller on an equal basis. Rounds 6733 to 6739 (6 shots) went into less than ¾ inch at 100 yards, but other groups opened wide and spread badly, or more than 5 inches at 200 yards. Experimenting to find a different load better suited to the worn bore did not help. The liner was through. Weeks said the tiny hollows had increased over the length of the bore and the rifling had disappeared for ½ inch forward of the throat, about 3 inches from the breech.

The first barrel (Silcrome Steel) of my .228 Ackley-Magnum was not fired long enough to determine its accuracy life or even to erode it. Still, Ackley found the throat eroded when he removed it. The second one showed appreciable throat wear after about 400 rounds of hot loads. An odd thing is that, while it is still accurate with the 70-grain bullets seated out, it is not as accurate with the longer 80-grain bullets. In fact, it now does slightly better with the short 60-grain bullets, whereas it originally did far better with the long 80-grain. Only very heavy loads were used throughout our testing of both barrels.

Our .22 Streamline had a heavy, tight-bore, four-groove, .22-caliber, Springfield barrel. It showed throat-erosion after only 200 rounds and has not been fired much since, but it is still accurate. I had a tool-steel barrel tried on the Johnson action. It was fired 3,000 times with assorted .30-'06 ammunition rapid fire, both automatic and semi-automatic. The erosion extended 8 inches forward. I am writing from memory and maybe only approximately correct. Some hawk-shooter in Western 400-yard country said his .220 Swift had a barrel life of 4000 rounds. Another said his own .220 Swift barrel became useless after only 500 rounds. Most reports say from 1000 to 2000 rounds for an average of 1500. We did not fire any given .220 Swift a sufficient number of rounds to determine its barrel life. From reports of 400 to 1000 rounds on the ultra-velocity small-bore Magnums the opinion is that they have an average barrel life of 700 rounds; Miller, Gipson, Ackley et al. No comparable reports on the relative barrel life of the .22 Varminter and .220 Arrow have been received, but the general opinion seems to be that both give equal barrels a longer life than do .220 Swift loads.

Ackley said the Silcrome barrel is very heat-resistant and cannot be burned at any reasonable temperature. However, it showed erosion after a couple hundred rounds, or no better than Ordnance steel once used in Springfield, Remington and Savage barrels. The .22 Streamline barrel of Ordnance steel did not have a fair break because of its tight bore and broad lands. Deep grooves and 6 to 8 narrow lands enhance barrel life. The Streamline's bore-erosion would have been mitigated perhaps, with smaller bullets than the standard .224-inch diameter we used in it. Ackley was trying a "Nitralloy" blank from Red Elliott in 1941, when he also contemplated Beryllium Copper Alloy for barrels because, as he said, it could be heat-treated when finished without distortion. Then the war came. He said my second .228 barrel would probably be Maxwell steel of which he had only one sample. There were only two of Silcrome. The Niedner and Winchester barrels are of a molybdenum alloy. After the war we will probably have new steels for rifle barrels in ultra-velocity calibers, heat treated and chromium lined.

THE 38 SPECIAL CLIP

Revolver Loading Clip, sent in by Lee Sales Co., is shown herewith. It was announced in these columns of the May issue. This one is our own sample which fits the Officers' Model Colt, but not the bigger cylinder of the Shooting Master, as all heavy-frame .38 Special revolvers require a larger size. Smaller cylinders would likewise require a smaller size as it must fit and the clips or cartridge holders must be spaced and located to correspond with the chamber holes in the cylinder. The cartridges are loaded in the clip one at a time and it is then carried in the pocket or on the holster belt for emergencies. With it the police revolver can be reloaded about as fast as an autoloading pistol with a spare clip.

* * *

.220 Swift. For the benefit of owners of this popular rifle I am giving here the dope sent in by R. O. Willman, of Mount Wolf,

Pa. He included his targets which I measured for extreme spread and relative impact. He used Western cases and No. 8½ primers with No. 4064 powder and W-M 50-grain 8-S bullets. After a half-dozen reloadings some of the cases had stretched slightly, but none of them required reaming. They were neck-sized only. The best all-around load was 38.5 grains, determined after firing 350 rounds. The selected bullet was also found to be the most accurate of any tried. The groups fired for relative impacts at different distances indicate very fine accuracy for the outfit, since they are representative groups and not selected.

Willman used a 15X Super Targetspot 1⅝ inches above the bore of his M-70 Winchester. It was zeroed on aim at 250 yards for 38.5 grains No. 4064. So zeroed, 5-shot groups were fired without change in elevation. The only 10-shot group was fired at 325 yards. It had 8 shots in 2 5/16 inches, 9 shots in 3½ inches and all 10 in 3⅞ inches. The only factory load included was fired at 200 yards with 4 shots in 3 5/16 inches and all 5 in a full 3¾ inches. The handload put 5 in 1 1/16 inch at 100 yards, 1 15/16 and 1½ inches at 200 yards, 2 13/16 inches at 250 yards and 2¾ inches at 325 yards. At the latter range 4 shots were in 1⅜ inches, at 250 yards 4 were 1⅝ inches, and at 200 yards the 4 shots measured 1 1/32 inches and ⅞ inch. This is excellent performance. Some of the single wide shots in some of the 5-shot groups were called bad when fired.

This outfit handled lighter and heavier charges fairly well as indicated by the several tried at 200 yards, with an arbitrary elevation zero. My measurements of these targets show the following:

Load (grains)	*5-Shots (inches)*	*4-Shots (inches)*	*Low (inches)*
36.5	1⅞	1 5/16	4¼
37.0	1½	11/16	3⅜
38.0	1⅝	1¼	3⅛
38.5	1 15/16	⅞	3¼
39.0	1 7/16	1	2½

Using the adopted charge of 38.5 grains and the 250-yard zero, the impacts were as follows: 100 yards, 1 7/16 inches high; 200 yards, ¾ inch high; 250 yards, on aim; 325 yards, 4½ inches low. With an average 5½-mile wind from about 3 o'clock the windage was on zero at 200 yards and 250 yards, and the impact was only ¼-inch left of aim at 100 yards. With a wind twice as strong from about 4:30 o'clock the impact at 325 yards was 3⅜ inches left. With the same wind, or a slightly stronger wind, from 11 o'clock the impact was 3½ inches right at the same range. Apparently, the normal right-hand drift of the bullet did not counteract all the left wind-drift at 100 yards, but exactly balanced it for the zero at 200 and 250 yards. At 325 yards it drifted about as far left as it had to the right with an opposite wind of equal force. The m.v. would be about 3800 f.-s. I figured the angle of departure to about 4¼ minutes of angle, indicating a gravity drop of 1½ inches at 100 yards, 6¾ inches at 200 yards, 9½ inches at 250 yards and 17⅜ inches at 325 yards.

* * *

F. L. Sizing Die. I am enclosing a drawing of full length resizing die that in my judgment is about the slickest piece of equipment yet to be passed along. It is very easy to make and operate, as it can be used on a small arbor press, drill press or with a rubber hammer (if you can find one).

Simply drill and ream a piece of cold rolled shafting the length and diameter shown and drill and tap for the plunger retaining screw. This can be case hardened and then polished inside to avoid scratching the cases. Or make it from tool steel and properly harden. The plunger is of cold rolled and need not be hard. Bell the mouth slightly for easy entrance of case. Sketch is for 38 S&W Special.

To use, simply set a case on the plunger and push it down to the head, turn over the die and put one on the other end. Push this down and out comes the finished first one. Flop her over and do it again. Simple? And sized clear up to the head.

This is not original with me although I have made several. It is used quite extensively on the coast here. Pass it along if you think it has merit.—E. B. WORKMAN.

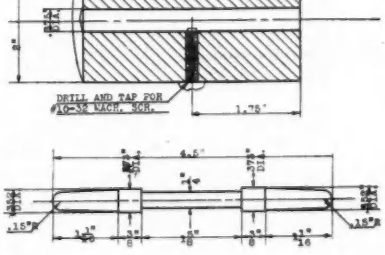
* * *

Steel Cases Again. Since bringing the matter to light in the May Dope Bag we have read the advertisements of other manufacturers of steel cases alluding to chamber-sticking trouble and announcing their own successful solution of the problem, however, without telling anything specific. We did not experience any extraction trouble in our own firing tests with the several sporting-calibers previously mentioned. We have also now received our first direct information on the matter; that is, beyond our own tests. We are told, by dope emanating from one brass manufacturer now developing the production of steel cases for small arms, that the steel used for this purpose is not clad but coated against corrosion. We printed, "clad or coated", after examining our own copper-colored samples (gilding-metal wash too thin to disclose any thickness under low-power magnification).

We are also informed that "these low carbon steels work harden to a greater extent than do brasses and they are positively annealed during the various operations of forming cases". Because of the remarkable resistance of our samples to corrosion, we had assumed they were either of some new ductile form of stainless steel or, on the other hand, not steel at all, but a singularly pure iron. We were so impressed by their failure to rust under severe conditions that we suspected a non-ferrous metal had been used until we tried our magnet on them.

The most important feature of these steel cases is also the most secretive, i.e., the special alloy or the special process required to make them practical for firing purposes. They must, of course, have the properties of cartridge brass or they won't swell out to grip the chamber walls and then spring back as surely and quickly to permit immediate extraction, as in automatic fire. The metal must also lend itself to deep drawing from a flat disk. A metallurgist friend told me heat treatment and tempering was necessary as well as the annealing between draws referred to above. Lacquer is used too.

THE .38 SPL. SIZING DIE



* * *

The Junior Varminter is one of those hush-hush wild-cats about which only rumors are heard. Jerry Gebby who christened it has learned that only the untold remains secret. Whether the rimmed .22 Hi-Power Savage case is used, as in the Marciante-Bluestreak, or the rimless case as in the Gebby-Varminter, this Junior is, I believe, identical in physical proportions and powder capacity to the Marciante job. Likewise, the Bluestreak * is in the category, as to capacity and ballistics, of such similar .22-caliber wild-cats as the .22 Hi-Power Lovell, the Donaldson-Wasp, the Rimless Niedner and the Improved Zipper. The .25-35 Winchester and .25 Remington cases are also used for many of these efficient loads. Perhaps also the 6.5-mm.

It is amazing to see these 30-grain and 34-grain cartridges penetrate and displace as much steel, at 100 yards, as the .220 Swift and .22 Varminter which hold ten grains more. The answer is that the efficient ones waste less of their lower potential with the same bullet. The boys are now much excited over the shortened, abrupt-shouldered and straight-walled (little taper) .220 Swift of similar capacity. The best of this group of wild-cats which I have seen holds a couple grains less and looks somewhat like the short creations of Henlein, McCormak, Zoerb or perhaps somewhat like the Mashburn Improved Bee, but with the much better brass of the .220 Swift mother case. For the regular Varminter the .257 Roberts case provides a much better web than the .250 Savage or .30-'06 case. A case which holds 27.5 grains No. 3031 holds 28 grains No. 4064 and 30 grains of No. 4320.

Harold Vaughn of Gloucester, Ohio, says his friend Corporal (State Highway Patrol) R. L. Doebel uses a Gebby Junior Varminter on the .22 Hi-Power case, which makes it another Bluestreak by a different name. This, or something similar, is what T. K. Lee used in his "Atomizer" Bull Pup, which was the subject of a story in our columns some months ago. Vaughn quoted Gebby as claiming fine accuracy, and velocities within a couple hundred f.-s. of his regular Varminter, which is not at all incredible. It has the Varminter shoulder and neck which some of the boys are using on their shortened .220 Swift cases. Doebel's rifle is a Sharps-Borchardt with a 16-inch twist, Savage Hornet barrel, and Vaughn has seen him "make some very long shots. . . ."

Vaughn uses the regular Varminter which he praises highly, as capable of doing a superlative job at any velocity from 1100 f.-s. to 4100 f.-s. and with any bullet from the 35-grain Spit Fire to the 63-grain Express, although he favors certain loads. The best is the Sisk 55-grain Express with 36 grains of No. 4320, which gives him 5-shot groups at 100 yards ranging from ½-inch to 1-inch spread. The heavier load of 38 grains develops 3900 f.-s., he says, but is not as accurate.

Another load which Vaughn mentions as a killer is 35 grains of No. 3031 behind the 48-grain Swift factory bullet and the F.A.

* 3446 f.-s. with 60-grain 8-S, 3706 f.-s. with 55-grain Express, 3917 f.-s. with 50-grain 8-S and 4280 f.-s. with 40-grain 8-S by J. B. Smith pendulum.

No. 70 primer. Another load for this bullet is 38 grains of No. 4320. Although 40 grains gives it 4183 f.-s. m.v., Vaughn says it is not as accurate as the lighter charge. He also uses the 50-grain 8-S bullet, in less windy weather, with 36 grains of No. 4320, which load gave him 13 straight kills on crows; ranges not given. A load which he calls good up to 200 yards is 41 grains of No. 4320 behind the Sisk 40-grain Express bullet said to develop 4491 f.-s. Vaughn sent in a nice 5/8-inch group, fired last fall in the M-70 Winchester with 39 grains of No. 4320 behind the 40-grain Express bullet at a quoted velocity of 4300 f.-s., the heavier load above being less accurate. Vaughn's best load with the 63-grain Express is 38 grains of No. 4350, and he reports killing "plenty of crows" and several chucks with this load.

In lighter loads, Vaughn uses the W.R.A. 46-grain O.P. Hornet bullet with 22.5 grains of No. 4759 for 3320 f.-s. and fine accuracy. He says these bullets foul the barrel at these velocities in some instances and require a reduction in the charge. A load of 10 grains gives 1800 f.-s. he says. The 35-grain and 41-grain Sisk bullets also work well over short or medium ranges when driven by 18 to 20 grains of No. 4759. Vaughn uses Winchester cases and No. 120 primers chiefly as well as Ipco wads. His bore shows no signs of wear after firing 3000 rounds and his cases require no trimming. His M-70 was built by Hervey Lovell with a 26-inch barrel tapered to 7/8 inch at the muzzle and having a 14-inch twist. It is equipped with a 10X Fecker scope. In March this year, a month of windy and unfavorable shooting weather, Vaughn killed 95-crows and several hawks, which is a testimonial to this outfit.

* * *

Fred F. Wells, now at 800 Broadway, Butte, Montana. has acquired the tools of his G. S. friend who built the .30-caliber Super Duper which we mentioned in the February Dope Bag. He says the cases were made of brass rods, machined out and turned down, leaving a heavy base. Then they were press-necked to take .30-caliber bullets. Experimental cases were also made of tool steel "which worked very satisfactorily". Because of the time and expense involved sample cases could not be sent to the many members who requested them.

Another point of interest was the .50-caliber M. G. case necked down, which we also mentioned. A pointed 220-grain bullet, with lead core and double jacket, is used. The first jacket is steel with the copper one over it. Wells sent a sketch of the cartridge and of the action which, latter, is of Bull Pup type. The receiver and bolt are milled from solid stock, the latter having four lugs, and it is nearly completely enclosed. The barrel is heavy and 40 inches long. As yet it has not been tested on armor plate. When the targeting and testing has been completed, we hope to receive the promised dope for publication.

Mr. Wells also sent us a photo of a Springfield bolt on which he had altered the safety as well as the bolt. For the benefit of other gunsmiths, Wells says the M-70 Winchester breech bolt block and the Tilden safety lever fit together and then in the Springfield bolt with very little machining. It provides a handy safety in connection with a low scope on the M-1903 rifle, says Wells.

* * *

Guard Arms. N. C. Pierce of Norwich, Conn., told us what his local plant guards had done in the matter of armament. Their side arms are O. P. Colts in .38 Special caliber with 5-inch barrels, carried in open-top holsters on Sam Browne belts. In reserve are repeating shotguns with buckshot and single-ball loads. They have fixed up 16-gauge Ranger bolt-action 6-shooters with a sling made from a dog leash and a bayonet adapted from the .45-70 Springfield rifle. This was cut down to 9 inches, reamed to fit the 16-gauge barrel and welded to its base part. The Krag carbine was fitted with a 9-inch M-1917 trench knife from war No. 1, the guard being bored to fit the muzzle and the handle being fastened with a band and a screw. This makes a short pointed bayonet which could be detached for hand-to-hand fighting.

* * *

Ball Powder. In THE AMERICAN RIFLEMAN we have published pictures of spilled shot and of spilled powder. That of the No. 12 pellets from .22 Shot cartridges and that of the ball powder from the .30-caliber M1 carbine cartridge appeared to be the same thing; they were that similar in the cuts. This ball powder, developed by the research facilities of Western Cartridge Co., is interesting for several reasons. It requires much less time proportionately in the dry state during manufacture and the total period of manufacture is 80% less, or only 1/5th the time usually required in powder manufacture. It is a nitro-cellulose product formed in water by chemical means plus agitation, the size of the surface globules (ultimate powder pellets) being determined by agitation. The spheres are uniform and almost perfectly round.

It is made in many plants here and abroad. We have found it in M2 Service ammunition as well as in the small carbine load. Behind the 150-grain .30-'06 bullet the weight of charge was 53.5 grains, whereas the maximum load of No. 3031 is nearly the same, or 54.0 grains, behind this bullet. The individual balls of powder miked from .200 to .203 inch. A 2-R Lovell case which holds 17.0 grains of No. 4198, holds 19.5 grains weight of this ball powder. A .22 Varminter case which holds 39.0 grains of No. 3031, holds 42.0 grains weight of the ball powder. It feeds or flows very uniformly in all gravity—feed powder measures as it pours and rolls freely. Because of this fluidity characteristic we have adopted it as a volumetric means of comparing the capacity of cartridge cases. It is almost as fluid and uniform as water and far more convenient for this purpose because it is dry. Our .30-'06 cases held from 61.0 to 65.5 grains weight of this powder. They vary with water too.

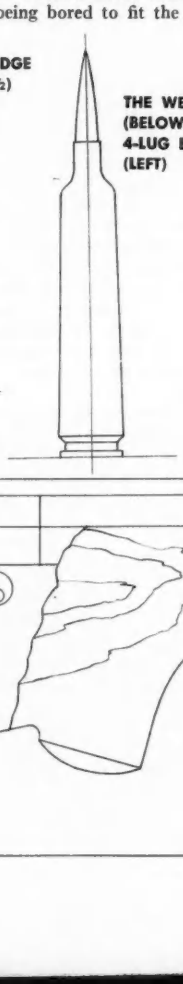
Experimenters have used it successfully in the .22 Hornet, .218 Bee and .22 Lovell. In a 2-R Lovell whose regular working load is 17.0 grains No. 4198 the best charge developed was 18.5 grains of ball powder behind the same 50-grain 8-S bullet. In a .22 Varminter whose normal load with the 60-grain 8-S bullet was 39.5 grains No. 4350 the best two loads were 36 and 37.0 grains of ball powder. In both rifles it gave as good accuracy as the regular propellant. In the Lovell, pressures seemed low and the residue left in the bore was excessive, but more like abnormal ash than incomplete burning, and there was no other fouling. In the Varminter, the lower half of the barrel became hotter than the breech end, and the muzzle end of the bore, beginning at the middle, became heavily coated with a black fouling which could be felt as well as seen, because it made the cleaning patch noticeably tight.

* * *

Likes the .220 Arrow. First let me say that I have for years used the Swift with fine satisfaction and killed many coyotes, some deer and a good many crows and hawks, etc. I have never seen a cartridge make so quick a job of a coyote. I and my shooting friend have surely made the woodchuck shooting popular in these parts of California [Susanville]. I got along fine with the Swift until I would start on a new can of powder or a different primer or try some different load

THE CARTRIDGE (REDUCED ½) BASED ON .50 MG CASE

THE WELLS ACTION (BELOW) AND 4-LUG BOLT (LEFT)



THE .50 MG OUTFIT

and then I would get into trouble. By the way, I handload for all my rifles. I finally settled on the 50-grain 8-S bullet as the best one for the Swift and got fine groups with certain loads, but every time I changed to another can of powder I would have to re-align the outfit, and under the war-time setup on ammunition it didn't look so good. My rifle is the M-70W, target weight. I have read pages on the Varminter and the way it handled all the various loads with equal accuracy and what an excellent cartridge it was. So I finally decided to do something.

I had written L. E. Wilson about his Arrow. When I told Mr. Wilson I could get my Swift rebarreled he agreed to rechamber it for me. I had Winchester ship it to him for the rechambering.

I loaded some ten different loads with 40-, 50-, 55- and 65-grain bullets, and I used powders 3030, 4064, 4320 and 4350. I loaded from 15 to 40 grains and various bullets, and they all grouped within one inch at 100 yards, except the 15- and 20-grain loads, and these landed 1½ inches directly under the rest. I soon found 40 grains of 4064 behind the 50-grain bullet was too hot and I finally settled on 38 grains 4064 as the one that seemed to work the nicest when opening the bolt. I naturally assumed that I would not get Swift velocity out of it. I aligned it to 200 yards, and then shot it at 400 yards. I was surprised to find it shot three inches flatter over 400 yards. The accuracy was excellent. It doesn't seem to make any difference if I load up or down one grain; the accuracy and the velocity seem equal, and the point of impact remains the same at 100, 200 and 300 yards. I believe the powder could be simply measured and be accurate enough in this Arrow. I load up 40-, 50- and 55-grain bullets and shoot crows with any of them at 200 and 250 yards. Of course, if I want to see one of those black devils really blow up I use the 40-grain and there isn't enough left for the live ones to hold a funeral over.

Now as to the case, it is a known fact that the Swift has one of the strongest cases, and it can be relied upon with almost any load that the case will hold, as the brass is the best available. It has the right powder capacity, for any bullet, to make clean kills at 300 yards and, under favorable conditions, at 400 yards. Very seldom do we have a split case, and I think the .220 Arrow is twice as easy on the case as the Swift. I have loaded one case in the Arrow 16 times with full-charge loads and, according to Wilson's cartridge gauge, it just hasn't stretched. The head doesn't show the pressure the Swift did and you reload a case several times before you can tell it. As to primers, I have used the W.R.A. 120, R.A. No. 8½ and the R.A. No. 9½ and the point of impact at 200 yards is the same and the pressure on the primer looks the same. So, when I reload this .220 Arrow, I just grab anything that is handy and put them together and they hit right there. The point of impact of my rifle has not changed nor have I changed the sight since the first aligning. Last week-end I never made a miss on crows, some well over 200 yards. It's wonderful what the sharpening of the shoulder of the Swift case will do. It has a sharper shoulder than the Varminter and a much stronger case. Wilson furnishes the resizing die and you resize them yourself. For reloading you can resize them with the Wilson die or use Swift dies by Pacific. I have used both with the Arrow, and they both seem to work satisfactorily.

AMMUNITION WANTED

For State Guard Battalion

.44-40 Remington or .44 W.C.F smokeless ammunition, one box on up. Needed to defend important area. Help us out.

CAPT. J. A. PUGH, III, Hq. 1st Bn. V.P.F.
Citizens Bank Bldg. Norfolk, Virginia

This .220 Arrow wipes out like a .22 Long Rifle; no metal fouling. I can shoot 20 shots with the Arrow and the barrel won't get as hot as the Swift will in 10 shots. I believe the barrel will last twice as long.

May I say Mr. Wilson is swamped with die orders for Uncle Sam, and he hasn't time to answer letters. I think this .220 Arrow is the finest varmint cartridge I have used or heard of.—TALMAGE L. WHITE.

TRADE DOPE

H. E. James of Hanover, Pa., announces he can furnish cartridge blocks of different types, and of several kinds of wood including walnut, maple, cherry, etc. One sample for the .22 Long Rifle was of teak wood and it held a hundred rounds. There were fifty holes for individual cartridges surrounding a middle hole designed to accept a box of the pills. As well as doing repairing and restocking, he buys old and modern firearms and does novelty wood work to order.

* * *

G. Norman Albree, whose various bullet designs have been given publicity, with considerable prominence, in these columns, has asked us to set forth his positive denial of any claims of superiority for his special form of boat-tail design as regards "lag" or "delay". He has consistently refused to see any virtue in the "streamline" tail for any bullet at velocities in excess of that of sound.

* * *

Announcements. George K. Turner will stop advertising his Instant Detachable Mount after this issue. He has plenty of mounts on hand, but no time to install them. He will resume advertising as soon as he is in a position to again take care of the mounting business.

Harvey E. Henshaw advises us that no more of his Beavertail Trigger Shoes will be made or advertised until further notice. He is devoting his time to gunsmithing and repair work only for police and plant guards at this time.

Don J. W. Tibbits of Whitefish, Montana, says deliveries on his gunsmith jobs are going out two or three weeks after their receipt, and asks his customers to be patient. Besides general gunsmithing he fits barrels to actions properly headspaced by him and alters bolts and makes new safeties for low scope sight installations, but at present he has on hand enough work for a year.

* * *

J. W. Hornady is promoting a business in jacketed bullets made from fired .22 Rim Fire cases which insures an ample supply of jacket material. Our samples are 48-grain .22-caliber S.P. bullets, all well formed. The accuracy is said to be fine in early tests at velocities reported as high as 3400 f.-s. We hope to try them in the Varminter and Lovell. Jacks have been killed up to 265 paces and many smaller varmints have been bagged. The production bullets will weigh 41, 45, 50 and 63 grains in both copper and brass cases. They are made by Vernon D. Speer, but sold by Mr. Hornady. Look for his advertisement.

* * *

Gunsmith Services still available include the following: Frank J. Wahl, 133 South Street, Bogota, N. J., makes custom stocks for hunting and target rifles as well as repairing and rebuilding all gun stocks. Maloy W. Bangs, Houston, Minnesota, does plain and fancy stocking, remodeling military rifles and rebluing. This is spare-time work, however, and no chambering or rifling equipment is available and such work must be farmed out. Chas. J. Myers, Wabash Ave., Bluffton, Indiana, does general repairing, remodeling, restocking and rebluing as well as conversion jobs on rifles and S.A. revolvers. His barrel-fitting work is now complicated by the lack of custom barrels. He also fits, adjusts and repairs triggers. Although well supplied with work, he can continue to handle new orders.

BEWARE OF RUSTITES

RIG

They'll rust your gun—pit barrels—corrode magazines—spoil trigger pulls—wreck gun scores! Guard against these devilish creatures with RIG, the rust preventive that's used by gun experts everywhere. Ammunition, finger marks, sea spray, rain, makes ideal playground for RUSTITES. A 2 min. app. inside and out after day's shooting keeps guns rust-free! Write!

AT GUN STORES
Accept no substitutes
Tubes—25¢
¼ lb.—50¢
1 lb.—$1.50

RUST INHIBITING PRODUCTS
5836-R Stony Island Ave., Chicago, Ill.

FOR THE SHOOTER BY A SHOOTER

Yours for Peace in '43

Freeland Standard Tripod	$6.50
Freeland COACHES TRIPOD	12.00
Freeland Arm Cuffs	2.25, 2.50
Freeland Rifle rest forks	.50
IDEAL SOFT HATS	1.50
Snap On Holsters	2.50
Rifle Slings	1.50
Freeland LUCKY FELLOW OUTFIT	6.50
Freeland Fore Ends, ...52s—$1.50; 37's—2.00	
LEE DOT, for your rifle scope	5.00
GOOD SPORT JACKETS	$5.95 and 7.95
LEATHER TEXAS RANGER BELTS	$1, 2.50

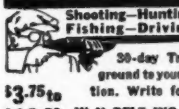
Catalogue free Courtesy assured

AL FREELAND
1112 35th St. Rock Island, Ill.
OFFICIAL TARGETS

POINTER STOCKS Molded in walnut and ebony for Colt Woodsman. Hi-Standard all models, $4.50. Colt and S & W $3.50 and $4.50. Molded in ivory 50¢ extra, for all models. At your dealer or direct. Send for illustrated circular.

WALTER MURAD
1006 El Camino, San Carlos, California

SHOOTING GLASSES



Shooting—Hunting
Fishing—Driving

30-day Trial. Also ground to your prescription. Write for booklet.

We still have a limited supply. Get yours now before it is too late.

$3.75 to $12.50

W. N. BELZ, INC., Opticians, 2 E. 44th St., New York
Specialists in Fitting Shooting Glasses.

Look WHAT $5.00 will buy

Your choice of this Scarce Ammunition

100—38 S. & W.; 40—30-40 Krag; 20—30-30's; 50—22 Hornet; 20—270's; 50—44-40; 250—22 L. R.; 20—32 WS; 20—35 Rem.; 20—30-06; 40—303 British; 40—348's; 100—32 S. & W.; 50—38 Spec.; 40—32 Rem.; 20—220 Swift; 100—25-36's; 60—45-90; 40—30-40 Blank; 300—22 Shorts.

Send money order with your order. Clean merchandise, original boxes.

THOMAS GILBOY, 820 Oak St., Scranton, Penna

THE ARMS CHEST

THE ARMS CHEST is an open market trading post where manufacturers, dealers, professional gunsmiths, and our own readers may advertise their goods and services to fellow sportsmen at a modest cost.

Returns are uniformly excellent—scores of advertisers report truly phenomenal results.

The rate is ten cents per word *including name and address*, minimum charge $1.50.

Groups of figures are counted as one word, also usual abbreviations made up of single characters or initials. Hyphenated words are counted as two.

Non-specific phrases such as "highest prices paid" and "top prices paid" are objectionable and cannot be accepted; the terms "fair prices paid" or "state price wanted" may be used. A *specific* price must be stated on all *for sale* ads except that a phrase such as "details on request" may be used when listing *quantities* of similar merchandise or *real estate*.

Box number or blind ads will not be accepted. Please give your *complete* name and address, so as to insure the prompt delivery of all mail or telegraphic replies. All advertisements *must* be accompanied by cash. Final closing date is the *5th of the preceding* month.

Please print all advertisements *plainly*—we cannot be responsible for errors due to illegible writing. Spell out all descriptive words; abbreviations may lead to serious misunderstandings and impair the effectiveness of your ad.

In describing the CONDITION OF GUNS advertised these standard phrases must be used: PERFECT means factory condition. EXCELLENT means new condition, implying negligible amount of use. VERY GOOD means practically new condition, implying little use, resulting in no appreciable bore wear and only minor surface scratches or wear. GOOD means moderate use with some finish worn off, only moderate bore wear with no pits and nothing worse than a little roughness in the bore. FAIR means reasonable hard service, reasonable wear inside, nothing worse than minor pits in the bore, implying the gun is sufficiently accurate for hunting. POOR means marred appearance and pitted or badly worn bore.

ARMS CHEST transactions are based entirely on good faith and mutual satisfaction. Deliberate misrepresentation or disregard for ordinary business ethics will, of course, result in expulsion from N.R.A. Membership and from the columns of the Magazine.

Purchasers who wish to examine, before acceptance, guns or equipment purchased thru these advertisements should request shipment by express, C.O.D. *with examination privileges.*

FEDERAL EXPLOSIVES ACT

Under the Federal Explosives Act of 1941 *all* buyers, sellers and possessors of powder and primers (not complete small arms cartridges) must be licensed. Such license is usually obtainable from your County Court Clerk. Purchasers must submit their license, or a certified or photostat copy therof, to the seller at time of sale.

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A quick, inexpensive medium for disposing of guns and accessories no longer needed, or for the purchase of more suitable similar items. We urgently request that a full description be given of every article offered, and its *condition* (see complete instructions above), for transactions of this sort must be based entirely on good faith and mutual satisfaction. Deliberate misrepresentation will of course result in immediate expulsion from N. R. A. membership.

Purchasers who wish to examine, before acceptance, guns or equipment purchased thru these advertisements should request shipment by express, C. O. D. *with examination privileges.*

FOR SALE

THE REVOLVER TIMING RECORD. A 10-inch RCA-Victor phonograph Record. Practice timed and Rapid-Fire anywhere, by yourself. Nothing to watch—just listen. For "dry" shooting basement and outdoor ranges. One side 10 second timing, other side 20 second timing. Plays on any phonograph, $1.50 postpaid. The Original Sight-Exchange, Box J, Paoli, Penna. 1-44

MATCH TARGET WOODSMAN, STANDARD stocks, excellent, 500 Kleanbore, $60.00. Colt New Service .38 W.C.F., fair, 5½ inch barrel, $27.00. Ward's Western Field 93M-491A, excellent, 500 Kleanbore, $20.00. Remington Cap & Ball, 8 inch barrel, fair, $12.00. Ray Brier, 740 West Main, Watertown, Wisc. 7-43

WOODSMAN, 6½", STANDARD, LATEST model, with heavy leather holster, perfect, $50.00. WANT—Winchester 52 Sporter, excellent. R. C. Kennedy, 512 16th St., Oakland, California. 7-43

38-72 WINCHESTER S.P., $2.00 PER BOX of 20. Decker Bros., 209 No. Fed. Ave., Mason City, Iowa. 7-43

Magazine Delivery

Your AMERICAN RIFLEMAN may be delivered to you several days later than to subscribers in other sections of the country.

In spite of our careful mailing schedule there is a spread in delivery of approximately four days caused by circumstances entirely beyond our control.

This situation will most likely continue during the war and we earnestly request your patience.

SCHMITT MODEL 24, .30-'06 RELOADING Dies, $14.00. Condition good. Will ship C. O. D. C. G. Harrel, 208 3rd Ave., S. E., Minneapolis, Minn. 7-43

SMITH AND WESSON STRAIGHTLINE .22 PISTOL, excellent, $35.00. Ideal Mould, .32 S. & W., old model, to size .311 or .313, for rat loads, in .30 cal. or 7.62mm Russian, $3.00. W. L. Shaw, New Boston, N. H. 7-43

S. & W. 1917 GOV'T. .45, EXCELLENT IN, VERY good out, 20 rounds .45 auto-rim, $40.00. W. Hunt, 600 First National Bank, Minneapolis, Minnesota. 7-43

COLT CAMP PERRY 10" BARREL, NEW, 300 Long Rifle and Holster, $35.00. Harvey L. Rumaner, 520 Beattie St., Syracuse, N. Y. 7-43

FOR SALE: FECKER 4X SMALL GAME SCOPE, 10 inch length. Plain micrometer mounts. Inside perfect, outside very good to excellent, $35.00. J. H. Furst, 444 West Main Street, Lock Haven, Pennsylvania. 7-43

VERY FINE .30-06 MAUSER RIFLE, HOFFMAN built. With 330 Weaver and Ammunition, new, $200.00. Henry Wichers, Russell, Kansas. 7-43

CARTRIDGES FOR COLLECTORS. LATest 1943 catalog, No. 2, 10¢. McDaneld & Wheeler, Osborne, Kansas. 7-43

HORNET 23-D SAVAGE, VERY GOOD, OILED stock, sling, Fecker 3-Power Small Game Scope with micrometer base; 100 empties, 150 primers, 50 factory, 30 hand loads First money order, $62.00. Robert Herrall, 235 S. Commercial St., Salem, Oregon. 7-43

$88.50, ED. VON HOFE 1/0 SURF REEL & LINE, $45.00. WANT—Fine old Dan LeFever 16 Double. F. Hornig, 11 Rolling St., Lynbrook, N. Y. 7-43

FOR SALE: MODEL 12 VENTILATED RIB WITH Poly 12 gauge, excellent, $95.00. B. & L. 6x25 Binoculars, $50.00. George Portman, P.O. Box 179, Wausau, Wisconsin. 7-43

REMINGTON .30-06 FACTORY WITH 22" BARrel and trim, $120.00. Winchester Model 63, factory with trim, $50.00. Bausch and Lomb 20 power scope with stand, factory, $50.00. Lyman 17 front with inserts, new, $5.50. Redfield 70 with round knobs, for Winchester 70, unused, $12.50. Colt .32 Automatic, inside, perfect, outside, slightly holster worn. $32.00. T. W. Hoopes, The Lancaster Corp., Richmond, Kentucky. 7-43

SELL: STANLEY COMBINATION PLANE, 55 honed cutters, perfect, $30.00. Keuffel & Esser Polyphase Duplex Slide Rule, instructions, case, excellent, $8.00. WANTED—B. & M. or Ideal Powder Measure; Small Rifle Primers; .22 L.R. Cartridges; #3 Ideal Reloading Tool Handles for Hornet. Holmes E. Walter, 625 Market St., Mifflinburg, Pa. 7-43

HIGH STANDARD HE 6¾ BARREL, LIKE NEW except for little bluing scraped off one side of barrel, 500 Long Rifle & Holster, $50.00. Harvey L. Rumaner, 520 Beattie St., Syracuse, N. Y. 7-43

FOR SALE: CURLY MAPLE WALNUT and Cherry Stock Blanks. L. G. Stockberger, Garrettsville, Ohio. 9-43

SELL: S. & W. SPECIAL .38 TARGET. FACTORY honed action with Patridge type sights, and 200 Kleanbore. Excellent plus. First M. O. $60.00. L. H. Amrine, 2925 W. Harrison Street, Chicago, Illinois. 7-43

.38 COLT POCKET AUTOMATIC, EXCELLENT, extra new barrel, 4 extra clips, 450 rounds, left hand holster, $95.00, complete only. Francis St. Clair, Port Jefferson, N. Y. 7-43

GREENER DOUBLE BARREL 12 GAUGE, 30" barrels, beavertail fore-end, both barrels full choke, stock has been remodeled, recoil pad, gun in very good condition, Model E-20, will sell for $95.00, money order preferred. E. D. Bair, Kinzer, Penna. 7-43

.375 HOLLAND AND HOLLAND MAGNUM. Eddystone action, Niedner barrel, bore perfect, Redfield ramp front, peep rear sight, sporter stock, recoil pad, telescope blocks, $75.00. Carl Weidenmier, Berlin Center, Ohio. 7-43

LARGE STOCK OF AMERICAN AND European Antique Arms. Send 10¢ coin for latest 9th edition catalog, featuring the important Dr. Buck collections. Antique arms wanted. We buy single pieces or whole collections. Fair prices paid. Kimball Arms Co., Woburn, Mass. tf

FOR SALE: EXCELLENT, FANCY .375 HOFFman Magnum, $250.00. Around 200 cartridges, $25.00. A. Ries, 10465 Carnegie, Cleveland, Ohio. 7-43

LOW-WALL WINCHESTER HORNET, FIRED under 100 rounds, blocks, empties, $30.00. .45 S. & W. Schofield, atcion good, cylinder tight, finish worn, slight pitting, ammunition, $20.00. Harlow Pease, Butte, Montana. 7-43

WEAVER 330S, POST, OPTICALLY AS NEW, outside very good, $25.00. H. L. Huber, Manhasset, N. Y. 7-43

FOR SALE: 32 GOLF BALLS, $20.00. ASSORTED, 23 for practice, 9 very good. WANT—500 .22 Long Rifle Cartridges. Russell Starn, 624 Duryea, Raymond, Wash. 7-43

New Classified Rates!

Effective with the August issue of THE AMERICAN RIFLEMAN the rate for all classified advertising will be ten cents per word, including name and address, with a minimum charge of $1.50.

Under existing conditions it is no longer possible for the Association to continue the special member's rate of eight cents per word, originally established for N. R. A. member's personal advertisements.

The present volume and scope of classified advertising makes it impossible to draw the line between personal and non-personal ads and we believe that the fair arrangement is to charge a uniform rate as is the custom with other publications. Rising publication costs make it advisable to establish this rate at ten cents per word in order to prevent loss to the magazine.

In order to further streamline the Arms Chest to meet present demands, the "Member's Exchange" and "Trading Post" classifications are being discontinued and all ads will be classified by subject only.

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HERE ARE A FEW MORE—JOHNSON FIRSTS

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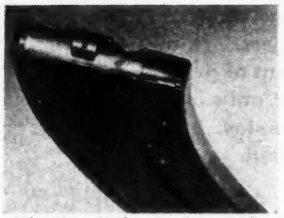
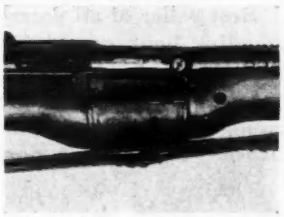


The first light machine rifle to use a clip loaded magazine with no feed lips



The first semi-automatic rifle to use a rotary magazine—10 shot capacity

The first semi-automatic rifle that can be loaded with the bolt closed and a cartridge in the chamber.

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Boston, Massachusetts, U.S.A.

GERMAN TRENCH KNIFE, $5.00. U. S. TRENCH Knife, $2.25. German Camouflage Helmet, $5.25. WANT—Perfect Colt Woodsman with quantity of Long Rifles. Dave Babcock, 51 Oakdale, Pleasant Ridge, Mich. 7-43

2-R LOVELL, 27 INCH CHROME MOLY Sukalle Barrel, Sharps-Borchardt action altered by Sukalle, Lyman 1-A, ramp front, blocks, "B" mounts for 330 or 440; beautiful, figured cheekpiece stock by Minar; Pacific case holder, priming arm, dies; over 300 loaded cartridges, empties, 500 #116 primers, 500 Sisk and 8-S bullets. All very good to perfect, magnificently accurate. $115.00; with Weaver 440-C, $140.00. Jack O'Connor, 1721 E. Sixth Street, Tucson, Arizona. 7-43

FOR SALE: .44 S. & W. MILITARY BELLY Gun, ramp front, homemade handfull grips, dehorned, like new, $65.00. .22-45 Conversion Unit less ejector, $15.00. Roy C. Hoard, 2416 N. Mesa, El Paso, Texas. 7-43

OFFICERS MODEL 38 HEAVY BARREL, excellent, $70.00. Charles Fritz, 2169 Glenside, Norwood, Ohio. 7-43

WINCHESTER 21 TRAP, 12x32, FULL, 3" Chambers, ventilated rib, beavertail, single trigger, case, excellent. 20 boxes trap loads 7½c, $190.00. Winchester 21, 20 gauge skeet, solid rib, beavertail, single trigger, excellent, 25 boxes field and trap loads $140.00. Will sell guns without ammunition if desired. O. T. Harstad, Freewater, Oregon. 7-43

WINCHESTER MODEL 12, 12 GAUGE POLY Choke, new, with 100 shells, $85.00. Harvey L. Rumaner, 520 Beattie St., Syracuse, N. Y. 7-43

SPECIAL SALE OF NEW AND USED shotguns and rifles. List ready. Stamp please. Kimball Arms Company, Woburn, Mass. tf

JOHNSON OUTBOARD, LATEST 5 H.P., EXCELlent, used 1 hour, Extras, $140.00 Money order. Fred Blake, 4 Amsbry, Binghamton, N. Y. 7-43

FOR SALE—CAMERA, KORELLA REFLEX II, Schneider-Radionar F.2.9, Everready carrying case, Kalart Micro Flash. Front lense (Proxar Type), extension 3 in. tube, Color Filter, all excellent condition. $120.00 for the outfit F.O.B. here. Dr. W. F. Biles, 3051 Idaho Ave., N. W., Washington, D. C.

SELL ACCOUNT IMPAIRED EYESIGHT, HI Standard B, 6¾". New inside, almost outside. Shot less than thousand times, seems OK every way. No checks, enclose stamp for return. R. A. Riffey, 205 East Water St., Pontiac, Illinois. 7-43

SELL STAR PREMO CAMERA, 4X5, CASE, plate and pack holder, good, $25.00. WANT—Evinrude light Four Motor, must be A-1 condition, late Model. WANT—Winchester Model 64, .30-30. Charles Arford, Dalhart, Texas. 7-43

SELL—53 WINCHESTER .25-20, INSIDE PERfect, rubbed, stock shows use, very accurate, $50.00 16 Browning Automatic latest Polychoke 22" barrel for Skeet and Cover. Excellent except blueing show use. $70.00 or trade for high grade 16 double Capt. Stan. Wade, Delmar, N. Y. 7-43

FOR SALE—WEAVER SCOPES: #344, $8.95; #29S, $13.50; #330S, $29.50; #440S, Xhair, $35.00. All scopes with any style T mount, brand new, factory box, send check or money-order. Frank Efinger, Box 85, Boundbrook, N. J. 7-43

GOOD, .32 COLT AUTOMATIC, HOLSTER, 20 shells, $20.00. Iver Johnson .32 hammerless, $6.00 .22 Short Revolver, $3.00. Weaver 329, $5.00. Tronn Field Glasses 3X, $10.00. Luger clip, $2.00. 2 Enfield, 1 cut down Krag, stocks, $2.00 each. 2 Brownie Cameras, $2.50 each. Greenfield U.S.S taps, dies ¼ to ¾, $18.00. Bench drill, two speed $20.00. WANT—Mould 311.413; Powder measure Gail Aldrich, Cherry Creek, N. Y. 7-43

REMINGTON 12 GAUGE AUTOMATIC, MODEl 11, 30", full, perfect, factory box, fired ten times plus one case Super X shells, 300 #6, 100 #2, 100 #0, $120.00; 1 case Kleanbore 12 gauge shells, 3¼, 1⅛, #6Ch., $30.00; 190 rounds 12 gauge Super X Rifled Slugs, $19.00; 60 rounds 12 gauge Super X #0 Buck, $6.00. Will trade latest Model Colt Detective Special for same S. & W. .38 Special M. & P., 4", blue, square butt. Ben Vaupel, Mt. Vernon, Indiana. 7-43

PARKER D.H.E., 12 GAUGE, AUTOMATIC ejector, double trigger, 30", F. & F., inside perfect, outside good, leather case, $175.00. Luger 9mm 1913 D.W.M., outside good, inside perfect, 4" barrel, $55.00. Mauser 9mm, 5½" barrel, perfect, $65.00 Winchester 1903 .22 Caliber Automatic, new barrel, rest good, Lyman 45 rear, $25.00. Remington C. & B. .44, target sights unfinished, some blue, inside fair, accurate, $25.00. Peerless Handcuffs, new, $10.00. Robert E. Seiter, 1510 Linden Road, Homewood, Ill. 7-43

BIG, NEW LIST—ODD LOT AMMUNItion. Single Shot Rifles suitable for Hornet, Lovell, etc. conversion. Rare Sharps Rifles and Ammunition. 10% discount to N. R. A. members. Send 6¢ in stamps. Paul Ratliff, N4912 Market, Spokane, Wash. tf

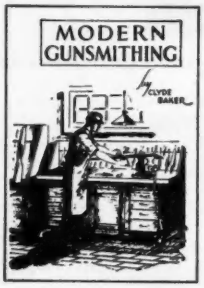
SELL: VERY GOOD WINCHESTER 42, 26" full choke barrel, nice sheepskin case, cleaning rod, $50.00. Winchester M75 Sporter, very good, sling, $7-E; also Fecker small game scope in Micrometer Mounts, $75.00. Thousand Hollow Points, $10.00 extra with gun only. D. M. Davis, 1707 31st St., Lubbock, Texas. 7-43

UNERTL SMALL GAME SCOPE, CONVERTED to 1¼" 10X by Litschert, ¼" Click Mount, excellent, $52.50. Lyman 438, Click Mount, very good, $17.50. Orrin A. Brendal, Detroit Lakes, Minnesota 7-43

FOR SALE: PRIVATE COLLECTION MODERN firearms. Send stamped envelope for list. No dealers. H. E. Walker, Life Member, R.F.D. #1, Raymond New Hampshire. 7-43

ANTIQUE AND USED FIREARMS. SEND 5¢ for list. H. A. Brand, 1008 Ingalls Bldg., Cincinnati, Ohio. 7-43

MODEL 70, .30-06, 24 INCH BARREL, 29-S Weaver Scope, Stith mount, recoil pad, Whelen type sling, very accurate, perfect, 120 Remington, B.P., 180 grain cartridges, fresh, $120.00. Winchester Model 57, .22 caliber, Stevens scope No. 475, sling, bluing worn, otherwise excellent, 500 Remington cartridges, fresh, $30.00. Model 53 Winchester .44-40, 22 inch barrel, very good, 50 cartridges, fresh, $35.00. Winchester 94, .25-35 Takedown, 26", shotgun stock, Lyman peep, double set used as single trigger, very good, 60 S.P. Western, fresh, $33.00. Winchester 94, .38-55 Carbine, Lyman peep, no middle sight, hooded gold bead, bluing worn on receiver, otherwise excellent, 36 S.P. Western, $40.00 Winchester 53 Takedown .44, Ivory front, no middle, Marble's peep, double set used as single trigger, barrel excellent, bluing worn, 50 cartridges Winchester S.P. fresh, $33.00. Ballard .32-20, circassian walnut stock, Shuetzen type butt plate, silver mounted, good, no rear sight but telescope mounts, 50 Western cartridges, 1 Ideal reloading tool for same, 400 primers Winchester No. 116 N.M.N.C. $25.00. Winchester Single Shot High Side Action .38-55, barrel poor, action excellent, $12.00. Browning Over and Under, 32 inch barel, Trap, ventilated rib, upper full, bottom improved modified, Beavertail Forearm, single selective trigger, Recoil pad, stock slightly marred, otherwise perfect, $115.00. Model 12, 12 gauge, 30 inch barrel, rib—full choke, recoil pad, perfect, $60.00. Model 97, 12 gauge, 28 inch barrel, full choke, excellent, $40.00. Model 24, 28 inch barrel, left full, right modified, no safety, excellent, $32.50. B mounts for Weaver 29-S, never used, $5.00. Money orders. Joseph F. Moynihan, West Grove, Pennsylvania. 7-43



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NATIONAL RIFLE ASSOCIATION

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CASE 10 GAUGE SHELLS, 13-4¾ x 1⅝, 7-4¼ x 1¼, assorted 4, 5 & 6's. $40.00. Harvey L. Rumaner, 520 Beattie St., Syracuse, N. Y. 7-43

KILBOURN-HORNET, DEADLY ON chucks and crows. 3,000 F.P.S. velocity with 45 gr. bullets, 2,900 F.P.S. with 50 gr. Your Hornet rechambered, $5.00. Magazines altered for long bullets. Winchester, Savage, $2.00. Lysle D. Kilbourn, New Hartford, N. Y. tf

ZEISS 8x40 DELACTIS EXCELLENT WITH brown leather case, $150.00. Walter J. Giger, 1318 11th St., Columbus, Nebraska. 7-43

WINCHESTER 70 2R LOVELL, 48WJS REAR, Weaver 440, Lee dot, Redfield mount, Tilden safety, oil finished inletted stock, honed trigger pull, very accurate, good sling, case, excellent. With 290 loaded cartridges, 1750 primers, about 5# powder, over 1000 Sisk bullets, Pacific scales, Ideal micro powder measure, set reloading tools. Everything $200.00. Winchester 63, reflector bead front, peep rear, Weaver 29S, case, very good, $55.00. Woodsman, 6½", stag grips, sheepskin holster, perfect, $45.00. Weaver 330, Lee dot, $36.00. First money orders. WANT—Winchester 1890, 52 Sporter, Rolleiflex Automatic Camera. V. V. Rhinehart, Solsberry, Indiana. 7-43

FOR SALE: NEW, PERFECT, MODEL 12, 28 gauge Winchester, 28" modified, beavertail, $75.00. WANT—12 quart Pressure Cooker and Model 37, 28 Gauge Winchester. Member. Thos. H. Jacks, Helena, Arkansas. 7-43

FOR SALE: HENSOLDT 10X50 DIAYLT Binoculars, case, $175.00. Sidney Morris, Jackson, Wyoming. 7-43

FOR SALE: ARGUS C3 CAMERA, CASE, FILters, etc., projector, Argus Macro Kit and Technicscope, all perfect, $70.00. Knight F.M. Adapter. $30.00. Weaver 1X Scope, new, $10.00 Books on magic list on request. L. Rourke, Wingdale, N. Y. 7-43

REMINGTON MODEL 37, NUMBER 00957, factory sights, very good condition, shoots small groups; also 10X Targetspot with three point Lyman mounts, excellent, both for $125.00. Argus 55mm Spotting Scope 20X, excellent, with Freeland Offset Stand, $70.00. Winchester .351 Automatic, outside good, inside very good, $50.00. Winchester Model 12 Skeet Gun, 26" barrel, 16 Gauge, excellent, $70.00. F.O.B. Pensacola. H. Cleaveland, Box 1388, Pensacola, Florida. 7-43

SALE—PERFECT .35 REMINGTON 81 AUTOloader, 300 Kleanbores, $150.00. Perfect 51M Mossberg with #9 Scope and 5,000 Kleanbores, $115.00. Perfect .380 Colt Automatic, 100 Stayniess, $45.00. .25 Colt Automatic, 200 Kleanbores, perfect in, good out, $35.00. Perfect 7.63 Mauser Pistol, 500 Kleanbores, $100.00. Good 7.65 Luger, 200 Kleanbores, $45.00. Sheepskin case included with each. Case (500) each Remington 16 and 20 gauge shells, $40.00 case. WANTED—6.5 and 9mm Manlicher ammunition, Kleanbore or equivalent. Will pay cash or will trade fresh .22 long rifle ammunition. Also want 7.65 Luger ammunition. F. R. Guy, Box 97, Montgomery, 1, Alabama. 7-43

JOHNSON LIGHT TWIN OUTBOARD, SERIAL No. 158441, Model OA55, approximately 4 H.P., condition good. Trolling Plate included, complete $50.00. 305 National Match Cartridges, 1923 and 1924, .30-06, 7¢ each. 125 Cartridges .30-06, 1917 and 1918, 5¢ each. 700 Cartridges .45 Colt Revolver, 1913, 4¢ each. 38 Krag Cartridges, 1917, 6¢ each. 72 Remington .32 Automatic Cartridges, Soft Point, 7¢ each. 12" X-Ring Centrifugal Bullet Trap, no lights or stand, $10.00. 21 Jewel Elgin Veritas Watch, open face, size 18, $15.00. 1200 Factory .22 Hornet Cartridges, 7¢ each. Motorola Model "100" Car Radio, $15.00. C. G. Harrel, 208 3rd Avenue, S.E., Minneapolis, Minnesota. 7-43

FOR SALE: SPRINGFIELD NATIONAL MATCH, as issued, except for addition of Lyman 48. This rifle is in perfect condition. I paid $80.00 for it a year ago and spent $12.00 additional for the 48, and never regretted it. Number 1,523,468. Sling and front sight cover included, as well as issue rear sight. Money back guarantee. I'm losing money at $90.00. H. J. Jackman, Ensign, U.S.N.R., 445 West 23rd, New York City. 7-43

FOR SALE: .32 CALIBER COLT OFFICER'S Model, heavy barrel, excellent. Dies for Pacific tool. Hensley bullet mould, #65-314-98, approximately 200 cartridges, 100 empties. No primers, no powder. $85.00 takes all. Grover L. White, 429 Tuscarawas Ave., East, Barberton, Ohio. 7-43

FOR SALE: 160 ACRE STOCK FARM, IRRIgated; 4-room house; 15 acres in cultivation, 3 acres alfalfa. Particulars on request. Located near Wilcox, Arizona. Earl T. Wells, Wilcox, Arizona. 7-43

FOR SALE: 50,000 WINCHESTER 111 PRIMers; 15,000 Winchester 108 Primers; $10.00 per thousand. Would be interested in .22 Caliber Jacketed Bullets. G. J. Dye, 3388 Whitney Avenue, Hapeville, Georgia. 7-43

BEAR SKIN RUG, WITH OPEN MOUTH HEAD, length six feet, perfect, $35.00. L. Rourke, Wingdale, N. Y. 7-43

SAVAGE 23D HORNET, 29S WEAVER T MOUNT, sling, trigger shoe, perfect, 545 rounds Remington Hornet cartridges, outfit $95.00. .380 Colt Automatic, excellent, 21 cartridges, $25.00. Earle Parker, Collierville, Tenn. 7-43

FOR SALE: EXCELLENT CASED PERCUSSION Match Rifle by Morgan James. Has fine full length scope also by James. Complete with false muzzle, starter, mold, swage patch cutter, Offhand outfit. Write for detailed description. $160.00. Jack Plunkett, 475 Emmett Street, Phoenixville, Penna. 7-43

FOR SALE: WINCHESTER MODEL 70 .30-06, fired less than fifty times. Equipped with Lyman Alaskan Scope, rubber recoil pad, leather sling, 160 rounds of ammunition goes with rifle. Excellent condition, slight saddle mark only, $150.00 complete. J. H. Alcorn, Merced, California. 7-43

MODEL 94 CARBINE .30-30, PERFECT, FIRED only for sighting, 1 box shells, $42.00. WILL TRADE—new condition Lyman Super Targetspot, and mounts, 10 power, for perfect .357 S.W. Magnum 6½ B. Harrington Richardson U.S.R.A. Model Target .22-10 B., perfect, $35.00. Abel P. Hedlund, 219 Metropolitan Bank Bldg., Minneapolis, Minnesota. 7-43

WINCHESTER 71, DELUXE, .348 CALIBER, new, with case, 16½ boxes of Winchester 250 grain silvertips, $135.00. Stamp please. William Monak, Member, 3140 W. Pershing Rd., Chicago, Illinois.

FOR SALE: WINCHESTER MODEL 21-12 gauge Skeet, 26 inch ventilated rib barrels, selective single trigger, Automatic ejectors, pistol grip stock, skeet fore-end, like new, $175.00. First money order gets gun. Thomas Mairs, Box 502, New Hartford, N. Y. 7-43

MUZZLELOADING REVOLVERS. COLT and Remington 44 and 36 caliber revolvers in fine shooting order, also moulds. Stamp for list. Kimball Arms Company, Box 257, Woburn, Mass. tf

NEW G. & H. DOUBLE LEVER MOUNT WITH Base for M-70, $22.00. Good 98 Mauser as issued, less stock, $16.00. WANT—330 with Mounts: also Micrometer Sight for M-70, 29S for Mauser. Ernest Rafalske, 185 19th Ave., North Tonawanda, N. Y. 7-43

9 M/M LUGER 8" BARREL, PERFECT, 150 cartridges 2 extra magazines, holster, $50.00. Harvey L. Rumaner, 520 Beattie St., Syracuse, N. Y. 7-43

FOR SALE: PERFECT ARGUS 55MM SCOPE and Freeland Stand, $65.00. WANT—Perfect late Model B. & L. Binocular 6 x 30 or 7 x 35, individual eyepiece focus. Verne F. Batteese, Damariscotta, Maine. 7-43

FOR SALE: SCHMITT MODEL 12, .38 SPECIAL Dies, extra .30-06 Bullet Seating Die, $31.00. .30-06 '18 ammunition 3¢, some cracked. .30-06 cleaned primed cases, 3¢. .38 S. & W. Ideal Tool attached bullet mould $6.00. Ideal Moulds, handles attached #358311, 429239, 308421, $3.50 each. Ideal Powder measure #6, $10.00. Shipped collect. Jack Zick, Lockport, Illinois. 7-43

K-HORNET, 23D SAVAGE DELUXE, 29S, STITH Mount, fancy walnut stock, 500 primers, 400 bullets, 200 cases, Lyman tool, neck resizer, above very good, clip repaired, $80.00. 29-S with T2 Mount, very good. $13.00. Sterling Baier, 106 Gray Court, Santa Rosa, California. 7-43

FOR SALE—SMITH WESSON .38 SPECIAL MILITARY Police, 4" barrel, new sand blast finish, Navy Standard, new condition with 250 rounds Remington Targetmaster Wadcutter Ammunition, all new, $45.00 Ed Bayliss, Hatfield Manor, Salisbury, Maryland 7-43

FOR SALE: PERFECT REMINGTON 22 AUTOmatic Speedmaster Long Rifle, Model 241, Weaver 344 Scope, T mount, 1700 rounds Remington Long Rifle Ammunition, Sheepskin case, $65.00. 171 rounds perfect 45 Automatic ammunition, $10.00 D. E. Wick, 817 W. Magnolia, San Antonio 1, Texas. 7-43

SELL—763 MAUSER MILITARY AUTOMATIC Pistol, perfect, shells, $75.00. .45 Colt Automatic, very good, 100 shells, $50.00. .38 Colt Automatic Pocket Nickel, very good, $40.00. Money orders. WANT—.22 Automatic Pistol: 22 Revolver: .38 Revolver. Earl Hunt, 237 Highland St., Hammond, Indiana. 7-43

FOR SALE: WINCHESTER ENFIELD AS ISsued, excellent, 50 F.A. 1934 issue, 115 empties, 30 brass clips, sling. $35.00. Commercial .45 Automatic, excellent, sheepskin case, 200 1926 F.A., 20 1918 issue, 290 empties, 455 DCM primers, Pacific resizing, seating dies, shell trimmer with cutter; Ideal bullet sizing dies, punch; Hensley two cavity Wadcutter mold, issue holster, two extra clips (fair), $70.00. Both outfits, $100.00. Verne Curtis, 3600 Foster, Evanston, Illinois. 7-43

EXCELLENT WINCHESTER MODEL 12, 12 gauge Skeet Grade, $70.00. 3 Boxes .219 Zipper Cartridges, $4.50. 880 empties, .300 Magnum, 3¢ each. Bud Price, Garland, Arkansas. 7-43

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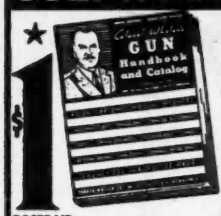

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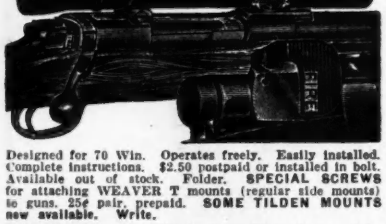

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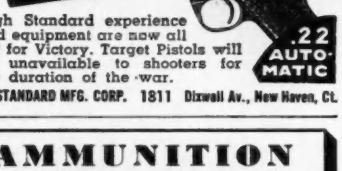

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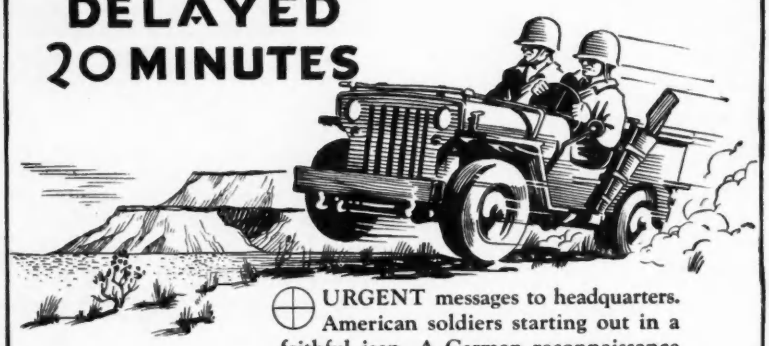

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WINCHESTER .32-20, 92, FANCY FINISH, $35.00. Winchester 86, .45-70, very good, $35.00. Winchester 86, .45-90, poor, $18.00. WANTED—92, .32 or .25 rifle or carbine, poor, barrel immaterial, good action. Empty cases, fired once, .30-'06, .30-40, .30-30, .32 Special, .32-20, .44-40 or .38-40. Wm. Lintner, 136 Miller, R.D. #2, Johnstown, Pa. 7-43

.22 H. & R. ULTRA SPORTSMAN, EXCELLENT, $35.00. .22 Hi-Standard, model E, 6¾", excellent, $60.00. B. & L. drawtube scope, excellent, $45.00. Westchester scope stand, good, $5.00. 550, .45 empty shells, $4.00. Krag bolt complete, $5.00. .45 Model 1911 slide, $7.00. Send money order. J. L. Polk, 3 Lakewood Place, Troy, N. Y. 7-43

JOHNSON TWIN 3½ H.P. OUTBOARD motor. A-1 condition, $65.00. Mauser action $10.00. .32 caliber S. & W. pocket revolver, good, $10.00. Frank Morey, Manistique, Mich. 7-43

HENSOLDT DIALYT 6X42 BINOCULARS, standard weight, excellent condition, $80.00. S/Sgt. Albert Mikolaitis, Fort Banks, Mass. 7-43

.220 SWIFT, MEDIUM WEIGHT, SEDGLEY BARrel on Springfield action, Fecker bases, cartridges, cases, straight line bullet seater, all in good condition, $65.00. Edward Paine, M.D., 132 Main Street, Waterville, Maine. 7-43

FOR SALE—REMINGTON .380 AUTOMATIC pistol, very good, $25.00. Marlin .38-40 20" barrel half magazine, very good, some cartridges, $21.50. Mauser 8mm. 22" light barrel altered from military without rear sight but separate Redfield peep, very good, $45.00. Remington rolling block .30-40 single shot 22" barrel, never fired, as purchased from Hudson, $11.50. H&A .32 rim-fire revolver, $4.00. S.&W. top break single action spur trigger 3" barrel .38, $11.00. WANT—28 gauge pump or double barrel. S. Marston, 17140 Third, Detroit, Mich. 7-43

K22, $70.00. WOODSMAN, $55.00. HI-Standard B, $40.00. P.P., 6 inches, $45.00. H. & R. Specials, $25.00. Trappers, $12.00. Stevens Target single, $12.00. Offhand, 6 inch, $10.00. S. & W. Magnum, 6 inch, with 4½ inch interchangeable barrel, $125.00. M. & P. .38 Special, 6 inch, $47.50. .32 Colt Automatic, $22.50. .25 Colt, $20.00. .25-35 Sedgley Krag, full Birds-Eye checkered stock, receiver, hooded ramp front, sling, 80 rounds commercial, Winchester tools, perfect, $100.00. Winchester 54, .30-'06, Lyman 54, $70.00. Winchester Hi-Wall, .22 octagon 30 inch by Diller, spirit level and Vernier sights, perfect, $50.00. Winchester 10 gauge lever, good, $25.00. Also 12, $22.50. Plenty of others, also ammunition. K. Green, N. Haverhill, N. H. 7-43

FOR SALE—BISLEY .38-40, 4¾" NEW BARREL, reblued, 50 cartridges, $30.00. Winchester Hiside, half octagon, relined 28" Lovell never fired, tools, empties, bullets, $25.00. Western Field Browning Pump Model 30, good, rod, case, $27.00. WANT—excellent 2¼ Noske. Edgar Leonard, 504 W. 4, Pittsburg, Kansas. 7-43

FOR SALE—MODEL 98 MAUSER .270, LYMAN 48, selected stock with cheekpiece, only test fired and 100 reloaded shells, $100.00. Another .270 by McRea on 30-S action with Noske 2½ power scope, $200.00. Will accept .257 Custom Mauser or Model 70 with scope in trade. W. J. Holliday, Hammond, Ind. 7-43

MODEL 52 DELUXE SPORTER, PERFECT, $85.00. Colt late model .32 Automatic, 2 boxes Kleanbore, excellent, $32.00. WANTED—Detective .38 Special Smith & Wesson or Colt 2 inch. Ralph Dittmann, 427 W. Bender Road, Milwaukee 9, Wisconsin. 7-43

NEW RIFLES: WINCHESTER 71 CALIBER .348, $74.65. Savage 99EG calibers .300, .250-3000, $61.75. WANT—.250-3000. .300, .348, .30-30, .38-55 cartridges. WILL TRADE—.300 Magnum cartridges, perfect 70 Hornet, $75.00. C. E. Purdie, Faribault, Minn. 7-43

OVER AND UNDER PERCUSSION KENtucky .44 rifled, 27 silver inlays ½ stock, accurate, powder balls and caps, $60.00. Roy Vail, Warwick, N. Y. 7-43

SELL—NEW WINCHESTER MODEL 21, S.S.T., ejectors, beavertail 28", F. & M., $145.00. Winchester 12, 12 gauge, 30", full ribbed good, $60.00. 16 gauge, Smith 28", F. & M., pad, beavertail, good, $45.00. Excellent, Commercial .45 Colt Automatic, 2 clips, shoulder holster, 125 rounds ammunition, $60.00. Stevens .22, 6", good, $12.50. Excellent S. & W. K22, $60.00. Victory Model S. & W. .38 Special, 4", new, $40.00, good, $35.00. Pacific reloading tool with dies for R2 Lovell, powder scales, weights, 100 new primed cases, 80 loaded, 15 empties, 560 primers, 325 41 grain bullets, 1¾ lbs. 2400, all $35.00. Pfleuger Supreme reel, excellent, $17.50. Bert E. Moen, 800 First Ave., Cedar Rapids, Iowa. 7-43

FOR SALE—COLT .45 AUTOMATIC, NEW BARrel, straight and arched housing, $50.00. Richard Bobb, Pouch A, Harrisburg, Pa. 7-43

S. & W. .357 MAGNUM, 3½", BEAUTIFUL SPEcial walnut grips, holster, all perfect, $100.00. Charles Cook, 1394 Myrtle Ave., Cincinnati, Ohio. 7-43

TWO .32 COLT AUTOMATICS. ONE VERY good, $25.00. One V.G. to excellent, pearl grips, $30.00. William Geiseman, 511 Wyandotte, Freeport, Illinois. 7-43

PACIFIC DIES: COMPLETE WITH SHELL holder, .30 Remington, .303 Savage, .250-3000, $9.00 per set. Without shell holder, .32 Remington, .38-55, .25-35, 8mm Mauser, $7.00 per set. .22 Hornet and holder, $10.00. Pacific scales and weights, $7.00. .30-'06 primer swage, $6.00. Ned Kailing, 8026 N. Division Road, Milwaukee, Wisconsin 7-43

K22, PERFECT, $60.00. S. & W., M. & P., .32-20, perfect, $45.00. M. & P. .38 Special, some holster wear at muzzle, $40.00. All 6" barrels. Starrett #230 mikes 0-1", new, what have you? R. Slagle, Marion, Ohio. 7-43

SELL—WINCHESTER 92, .25-20, CONDITION good, assorted cast bullets, 975 gas checks, 700 plain, 157 primed, 60 unprimed cases. Complete reloading tools except handles, full length resizer. First, $36.00, takes lot, no split. Dr. W. D. Witham, Glouster, Ohio. 7-43

FOR SALE—SPENCER .50 R.F., VERY good, $10.00. Ballard .44 R.F., very good, $8.50. Remington Lee .45-70, good, 40 cartridges, $16.00. Remington-Hepburn, .40-90, good, $17.00. .40-110 reloading tools, new, $5.00. Fred Wainwright, Grayling, Michigan. 7-43

S. & W. .38 SPECIAL, 6 IN. TARGET, MERSHON adapter, 75 wadcutters, excellent, $50.00. 41 Remington Derringer Nickel, excellent out, good in, 35 cartridges, $17.50. Single Shot Remington .44-40 rifle, good out, fair in, 35 cartridges, broken ejector, $10.00. Springfield .45-70 excellent out, good in, 10 cartridges, $8.00. WANT—Match Target and good deer rifle. Foster G. Marshall, 6936 Pearl St., Jacksonville, Fla. 7-43

FOR SALE—F 1.6 50MM. KODAK ANASTIGMAT lens for Cine Special or Magazine Kodak, never used, $90.00. Large Johnson outboard motor about 16 H.P., with lengthened shaft, several years old but never used, $100.00. One 16/0 Penn reel with 39 thread line, $75.00, and one 12/0 Penn reel, $50.00. WILL TRADE four boxes of Swifts for four boxes of Hornets. WANT—to buy custom Mauser .257 Roberts with 2½ power scope, must be good. W. J. Holliday, Hammond, Indiana. 7-43

.38 CRAMER MOULD, THREE CAVITY, NO. 24, $8.00, excellent. K22, excellent, $60.00. F. G. McDonald, 713 Lombard, Evansville, Ind. 7-43

COLT .32-20, ARMY SPECIAL, 6 INCH BARrel, good condition, ½ box cartridges and excellent Lawrence holster, $35.00. Ortgies German .32 Automatic, ½ box cartridges and holster, good condition, $18.50. Winchester S.S. .22 Short musket, 28 inch, No. 2 round barrel, adjustable Lyman rear and blade front sight, very good outside, good inside, 2 boxes cartridges, $17.50. 7.63, .30 caliber Mauser, 10 shot, 6 inch barrel, 100 cartridges, 2 clips and holster, all in excellent condition, $68.00. #438, 4 power scope low mount, outside adjustment, 30% blueing worn off, complete with bases and rubber eye cup, $25.00 Stanley Sprague, Lewis Farms, East Greenwich, R. I. 7-43

'98 MAUSER, RESTOCKED GOOD IN AND OUT, $35.00. Muzzle loader and mould, about .40 caliber, rebored, never fired, original stock, $20.00. Lt. V. B. Taylor, Hq. Armored Force, Fort Knox, Ky. 7-43

CUSTOM MAUSER .30-'06 WITH SCOPE mounts, 26mm., $150.00. Custom Mauser, .30-'06 Mannlicher type, $90.00. Mannlicher Schonauer, $135.00. 12 gauge, Parker D.H., $85.00. 28 gauge, Parker, $125.00. .250 Mauser Magnum and tools, $165.00. Three Hensoldt 2¾ power scopes, new, $75.00 each. One 3-5X Hensoldt, $125.00. Shell for all guns. Prices cash. Only stamped envelopes answered. Bert G. Kapp, 122 W. 27th St., Los Angeles, Calif. 7-43

COLT .45 ARMY AUTOMATICS, VERY good to excellent, $50.00 to $60.00. Colt and Smith & Wesson .32-20 and .38 Special, good to excellent, $35.00 to $60.00. For those who want the best, and will pay what they cost, in the present inflated market, we offer the following custom finished arms. All are equal or better than new. We will take other guns in trade. Ammunition will be sold with all, 1000 Kleanbore with each .22. Colt .45 National Match. Colt .22 Match Target. Super King Colt .38 Officers' Model, finished by Buchanan. Colt .44 New Service Target. Hi-Standard Model E 4½". Smith & Wesson .357, 6". Winchester 52 Sporter, 330C Weaver, case. Winchester 52 Heavy Petersen, bull gun, Hart action. Winchester 70, .250-3000. Winchester S.S., Pope heavy barrel, .22. Winchester 54, .30-'06. Springfield Sporter .30-'06. Springfield .30-'06, heavy barrel, bull gun. Winchester 63, .22 Automatic, Weaver 29S. Winchester 21, 12, skeet. Smith Monogram, 12, 28, IC&M, ejectors. Parker, VHE 20, 28" IC&M. Also Bausch & Lomb spotting scopes, and binoculars. Gun Shop, 221 S. First St., Louisville, Ky. 7-43

SELL—VERY GOOD 12 GAUGE PARKER, CH grade, ejectors, double triggers, 32 inch barrels, leather case, $190.00. Colt Police Positive .32-20, good, $21.00. 380, .300 H. & H. cases, 140 primed, $7.50. 300 H. & H. parts for Schmidt 24 tool, $7.50. Dean Shumway, Superior, Wisconsin. 7-43

SELL: KRAG, AS ISSUED, SLING, V.G., $28.00. Ammunition $1.50 box. .45 Colt Automatic, commercial, good, $50.00. Colt .22 Automatic, pre-Woodsman, extra magazine, Heiser holster, V.G., $48.00. 33X Bardon scope, exterior poor, optically O.K., $18.00. O'Hare Springfield sight micrometer, $4.00. Starrett 0-.150" dial paper or sheet micrometer, case, new $20.00. Starrett 0-2" micrometer, .0001" vernier, case, excellent, $20.00. Starrett, 0-50mm, metric micrometer, good, $15.00. B. & S., ½" micrometer, .0001" vernier, stainless, case, excellent, $18.00. Pflueger Automatic Fly reel, new, $8.50. Cross, custom, single built, 9½' bass rod, new, $28.00. Heddon 5', #15 casting rod, new, $18.00. Thacher cylindrical calculator, with magnifier, excellent, $75.00. Apothecary scale, accurate 1/32 grain, $50.00. .45 Automatic ammunition, 1918, $6.00 per 100. E. Grundeman, 809 No. Oneida St., Appleton, Wis. 7-43

BOOKS FOR THE DISCRIMINATING Sportsman: The Modern Gunsmith, Howe, $15.00; Complete Guide to Handloading, Sharpe, $7.50; The Muzzle-Loading Rifle, Cline, $7.00; The Bullets Flight, Mann, $6.00; A Forgotten Heritage, Davis, $4.00; Encyclopedia of American Hand Arms, Late Edition, Chin-Harden, $8.00. All postpaid. C. E. Purdie, Faribault, Minn. 7-43

WINCHESTER M12, 12, 28" MODIFIED, NEW recoil pad, good, $35.00. Old M520 Stevens, 12, fitted with new poly choke, ivory sight, 24 in. barrel, $25.00. Winfield grade M12, 12, 30", full, fitted with vent-rib, figured forend, ivory, and new recoil pad, 14⅛ x 2 x 1⅝, good, $75.00. Fox, Grade J, 12, 30", full and case, 14¼ x 1⅞ x 1⅝, excellent to perfect, $125.00. TRADE—for Browning O. & U. trap. J. J. Frederick, Prophetstown, Ill. 7-43

SALE: FOX SHOTGUN, C. E. GRADE, RIFLES, scopes, pistols, ammunition, primers, spotting scope, binoculars, view camera, lenses. Send stamp for price list. WANT—Weaver 440, mounts for Winchester 54, high grade Parker or Fox, 16 or 12, single trigger, pistol grip. R. L. Sheeler, 2421 W. Broadway, Council Bluffs, Iowa. 7-43

NEW ENFIELD, AS ISSUED, $35.00. 438 LYman scope, quarter minute click mounts, $20.00. J. W. Hornady, 624 South Monroe, Grant Island, Nebr. 7-43

SAVAGE HORNET, 29S WEAVER SCOPE, EXcellent; 105 factory loads; 930 #6½ Western primers; 100 empties; 28 primed empties; 270, 40 grain and 406, 35 grain Sisk bullets; 1½ lbs. #2400 powder; Ideal tool complete. First money order for $88.00. Shipped express collect. Milton S. Freeman, 14322 Dickens St., Sherman Oaks, Calif. 7-43

SPRINGFIELD STRIPPED RECEIVERS, AS issued, $7.50. Heat treated $9.00 each. Complete bolt asemblies, $9.20. Trigger guards, $3.60, extractors, $1.50, ejectors and cut-offs, $.50 each. Other parts, price on application, stamp please. All parts for .45 Colt Automatic except frames and barrels; new grips $1.75 pair. All above f.o.b. Philadelphia. No order less than $1.00 please. E. S. Burrell, 717 Wyndmoor Ave., Philadelphia 18, Pa. 7-43

FOR SALE: KRAG SPORTER, 25 INCH BARREL, very good inside, good outside, no sights, new Bishop stock with Monte Carlo comb and cheek piece, sling swivels, one box ammunition, $30.00. M. H. Huffman, Dunlap, Illinois. 7-43

ENGRAVED .357 S. & W. MAGNUM, 5" BARREL, carved ivory grips, carved holster, ammunition, perfect, $160.00. Woodsman, 6½ barrel, factory box, perfect, $50.00. Woodsman, 6½ barrel, excellent, $45.00. Clay Fielden, Texarkana, Texas. 7-43

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TWO WINCHESTER FANCY MODEL 1876 rifles, caliber .45-75 and caliber .45-60, take your choice, both very good, each $24.50. Winchester Model 1894 carbine, caliber .32-40, very good, $24.50. Stevens #7 Premier single shot, tip-up, .22 Long Rifle, 26 inch Lyman peep sight, excellent, $27.50. Winchester Model 1866 (first model made) caliber .44, rim-fire, very good, $24.50. Evans repeating rifle, model 1871, caliber .44 Evans, very good, $24.50. Marlin carbine, straight stock, three-quarter magazine, Lyman sight, very good, $24.50. Parker Trojan grade, 12 gauge, 26 inch modified and improved cylinder, very good, $75.00. We buy, sell and exchange all types of good used firearms. Just ship us what you have. We'll quote our best offer by return mail. If not satisfied we'll promptly return merchandise. M & H Sporting Goods Co., Established 1872, 512 Market Street, Philadelphia, Pa. 7-43

WINCHESTER 52, GOOD, $40.00. WINCHESTER 57, good, $30.00. .30 Luger clip holster, $50.00. Details, stamp. Louis Racicot, 451 Main, Norwich, Conn. 7-43

FOR SALE—PARKER BHE GRADE, 20 GAUGE, 2 sets barrels, 28", improved cylinder and 30" full, pistol grip, 1⅝ x 1⅞ drop, single trigger, automatic ejectors, in genuine walrus trunk case with Gesamee lock, cost $650. Will sell for $400. W. J. Holliday, Hammond, Ind. 7-43

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70 WINCHESTER, .300 MAGNUM, TARGET weight barrel, extra stock, $110.00. Redfield Jr. 70 Scope Mount, $6.00. Super 70 stock for standard barrel, $18.00. 3A Kodak Special, $35.00. All excellent. Herman Jaquith, Rumney, N. H. 7-43

.44 SPECIAL N.S.T., 7½", PERFECT, $60.00. .32 Longines Automatic, excellent, $18.00. .32 Remington pump, good, ammunition, $48.00. .30-30 Winchester Model 55, V.G., $45.00. 6", .38 Special Auxiliary Barrel for 12 gauge, $7.00. A. V. Bissell, Terryville, Conn. 7-43

WOODSMAN TARGET AND MATCH TARget Models; High Standards, Models B, C, D & E. .30-40 bolt action Springfield; .30-06 bolt action Enfield; .32 lever action Winchester Model 1895; 401 Winchester Automatic Model 1901; also target and defense automatics, revolvers, shotguns, rifles. Prices on request. 25 lb. bag Western air rifle shot, $5.00. Close out, old stock primers, 9750 #0; 200 #2½, 8000 #5; 1800 #6; count is more or less, lot $50.00. New U. S. Rubber hip boots 6, 10, 11, $12.50 pair. Stamp please. Rudolph's Atchison, Kansas. 7-43

FOR SALE: FACTORY FRESH NON-CORROSIVE ammunition priced per box: .30-40 Krag, $3.00; .35 Winchester, $2.50; .45-90, $1.90; .38 Colt Super Automatic Hi-Speed Mushroom, $4.00; 8mm. Mauser, $2.25; .30 Remington Automatic, $2.00; .25 Colt Automatic, $2.25; .32 S. & W., $2.25; .32 S. & W. Long, $2.50; .38 S. & W. Short, $2.75; .32 Rim Fire Shorts, $12.00 per 1000; 29 handloaded .25 Roberts, $2.75. Odd lots, fired cases, details, stamp. All letters answered. Russell Elder, Griffin, Ga. 7-43

GOOD .22 NIEDNER MAGNUM, HEAVY BARrel, Winchester H.S. action, double triggers, 5A Lyman scope, handloading tools, cases and components, $85.00. J. B. Grosso, 527 N. Center, Bloomington, Illinois. 7-43

TWO 7MM MAUSERS M93, RAMP AND REDfield 70, very good in, outside excellent, with 100 cartridges, $65.00 each, inspection allowed. Frank M. Riddle, 214 Imperial St., Oil City, Pa. 7-43

REMINGTON MODEL 14, 30 REMINGTON, very good, eight boxes special cartridges, $40.00. Winchester Model 67, .22WRF, new, 1200 HS cartridges, $23.50. S. & W. Model 1917, .45ACP, very good, holster, 200 cartridges, $50.00; without cartridges, $42.00. Winchester M61, 22 L.R., Lyman 56 rear, Sheard front, excellent, $35.00, with 350 H.S. cartridges, $40.00. Winchester M74, .22 short automatic, military sling, Weaver 29S B mount, excellent, 500 H.S. cartridges, $50.00; without scope assembly, $27.50. Colt .32 Automatic, very good, 50 cartridges, $32.50. Colt Shooting Master, .38 Special, new, 500 cartridges, $105.00. Model B High Standard .22 L.R., 6½", new, $35.00. Another, excellent, $30.00. WANT—.50 caliber round ball mould, Lyman full length resizing dies, .45-70, .30-'06. J. W. Varner, P. O. Box 281, Scranton 1, Pa. 7-43

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19 N.R.A. SAVAGE, #906, REDFIELD, EXCELlent, $35.00. Fine old Mersham pipe. Muzzle loading double barrel, cheek piece stock. Photo and details if interested. WANT—52 Winchester, standard Lyman 48. William Eisfelder, Pinckneyville, Illinois. 7-43

$5.00 NEW GOVERNMENT FIBRE DESK trunks with partitions and lock. Suitable for Medical Officers especially. Cost $30.00. Weil's Curiosity Shop, 12 Strawberry St., Philadelphia, Penna. 7-43

EXCELLENT LATEST M37 REMINGTON, REGular rear, Goss front, trigger shoe, sling, 1800 selected .22 L.R., $100.00. George Bjornstad, 1626 Fargo Ave., Chicago, Ill. 7-43

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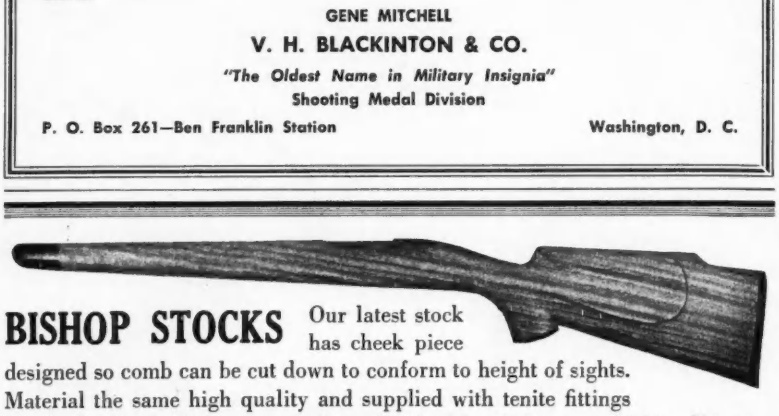

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FOR SALE: MODEL 52, STANDARD BARREL, 17 front, 48 rear, shot less than 1000 times, $60.00. Weaver 440, B mounts, new, $30.00. F. E. Britton, Marlboro, N. H. 7-43

FOR SALE: MY ENTIRE LOT OF FINE GUNS, I will include 100 shells with each gun free. One Remington Automatic Model 11, 12 gauge, rib barrel, excelent, shot less than 4 boxes of shells, $125.00. One Remington 12, 30", Model 31, perfect, $100.00. One Winchester Model 12, 12 gauge, 28", rib barrel, perfect, $100.00. One Winchester Model 74, .22 Automatic Long Rifle, excellent, with 500 shells, $50.00. One Colt .45 Automatic Model 1911, in good, out blueing worn, with 100 shells, $45.00. 500 rounds 1938, .30-'06 ammunition, $50.00. Johnson, nearly new, 5 horse alt. firing, deluxe outboard built in starter, excellent, $150.00. Otto J. Mees, Wilmot, S. Dak. 7-43

W. C. SCOTT DOUBLE HAMMERLESS 12-30", excellent, cost, $350.00, price, $175.00. Enfield with sporting stock, very good except bore rough, $46.00; .38-40 Marlin, good, $32.00; Davis 12-30" hammerless, $20.00. WANT—any amount .22 and .32 R. F. ammo. R. L. Mann, 1119 25 St., Newport News, Va. 7-43

SWIFT, HORNET, 2R, BEAUTIFUL STOCKS, etched, tools, components, photo, ideal lubricator, $8.00. WANT .30-'06 rifle. T. W. Hildemann, Frenchtown, Mont. 7-43

COMMERCIAL .45 AUTOMATIC, EXCELLENT, $60.00. Springfield action, low number re-heat-treated receiver, nickle steel bolt, excellent, $25.00. No telegrams. Bos'n Jess Berger, Sachuest Point, USNTS, Newport, R. I. 7-43

COMMERCIAL .45 AUTO LATEST ARCHED housing very good, $55.00. Another Gov't good, $40.00. Colt new service 5½, .45 rimmed, very good, $45.00. Another 7½ very good Miles City doubled cartridge belt and holster, 135 shells Western outfit, $60. .38 S. & W. hammerless, blued, excellent, 100 shells, $30.00. Remington 12 gauge auto, new barrel, rest very good, $55.00. Another factory reconditioned new latest checked stock and forearm, $55.00. Winchester Model 12 plain 12 gauge good out, excellent in, $45.00. WANT—8mm. projector, Martini .22, high grade Sharps Borchardt. R. S. Cook, Alpena, S. D. 7-43

$6.95. SPRINGFIELD CARBINE RIFLE. .45-70 caliber, slightly used, limited supply. Weil's Curiosity Shop, 12 Strawberry St., Philadelphia, Pa. 7-43

FOR SALE—POPE .38-55, DOUBLE SET TRIGgers, Imported walnut stock, Sidle scope, loading tools, muzzle bullet seater, moulds, plush lined Mahogany case, exceptionally good condition, $110.00. Lyman 5A scope, quarter minute mounts, sole leather case, blueing slightly worn, $50.00. Smith & Wesson .38-44 Outdoorsman, perfect, King sights, loading tools, moulds, factory ammunition, powder and primers, $100.00. WANTED—52 or 75 Sporter. Harold B. Jackson, Box 158, Bancroft, Mich. 7-43

WINCHESTER 75 SPORTER WITH LATEST Weaver 29S scope, T1 mount and lens caps, also gun sling and Berlin sheepskin case. Rifle excellent in and out, used very little. Scope has blueing worn, otherwise excellent, $50.00. Charles F. May, Route #1, Holtwood, Pa. 7-43

FOR SALE—K22, PERFECT IN, VERY GOOD out, $62.50. With 500 fresh L.R.'s $70.00. Springfield D.C.M. Sporter, good, $55.00. Some Components available if wanted. Hi-Standard Model C, 6", factory new, never fired, $40.00. With 500 fresh shorts, $46.00. Sidney Frye, Caprin, Ill. 7-43

3 EXCELLENT WINCHESTER 70'S STANDARD $65.00 each. Swift and .300 Magnum 26" .257, stock shortened 1", recoil pad, 24", very good, Deluxe Winchester .348, 24", peep sight, $60.00. Excellent 141 Remington 24" Lyman combination peep and open sights, $60.00. .348 and 141 tapped for hunting scope, 300 for target, very good Savage automatic, $25.00. Good Luger 7.65 and 350 cartridges, $50.00. Will sell some ammunition with above guns only. Dr. Charles Reynolds, Huntington, West Va. 7-43

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WINCHESTER MODEL 54, SUPER GRADE, .270 caliber, excellent, fired 80 rounds, 60 factory loads, $82.00. Remington Field Master, .22 caliber, as new, 500 .22 long rifle, $33.00. Fox Double 16 gauge Model B, excellent, one scratch, 3 boxes shells, $30.00. 300 Late issue .30-'06, 6¢ each. 60 .401 Remington Kleanbore S.P., $2.00 box. David Roberts, Jacques Ave., Staten Island #6, New York. 7-43

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FOR SALE—WINCHESTER 62, PERFECT, WITH 500 .22 L.R. Super-X or Reg., $27.50. Savage Model 4, perfect, open sights and Weaver #344, T-mount, with 500 .22 L.R. Super-X or Reg. $26.95, without scope, $17.50. Savage 219 Hornet, tapped for T-mount, excellent, in and out, 1 box H.P. Super-X, $19.50. Can furnish Weaver 29S, 330 or 440. WANTED—Stevens #26 .22 L.R., #44 or #414 .22 Short, good or better. Model 70, Standard or Target grade, .22 Hornet, .250-3000 or .257, very good or better. Roger Schmill, Life Member, 18429 Fielding Ave., Detroit, Mich. 7-43

KENTUCKY RIFLE, PRETESCH BARREL 31 inches, Goulcher lock, .36 caliber, $10.00. Belgian rolling block about .50 caliber, barrel 47 inches, inside very good, outside poor, $5.00. Clabrough Bros. 12 gauge without forend, $5.00. Wm. Mansfield, 7617 Gannon 5, University City, Missouri. 7-43

.763 MAUSER (MILITARY VON LENGERKE commercial importation), adjustable sights 500 meters, $65.00. .30 genuine Luger, 8 inch barrel, squeezer safety grip, $60.00. .45 Colt Automatic, arched housing, pearl grips, $65.00. .45 Colt Automatic, arched housing, $60.00. .45 Colt Automatic, $55.00. Two .30 Lugers, 3¾ inch barrel and 4 inch barrel, with the original Berlin cases, $65.00 each. .32 Colt Automatic, $30.00. All the above guns are in good to very good condition mechanically and in appearance. .45 Colt Automatic, $45.00. .32 Colt Automatic, $25.00. .25 Colt Automatic, $20.00. .38 Special Army Special, $40.00. .45 Colt Army revolver, $40.00. .32-20 Colt Frontier S.A., $35.00. .45 Colt Frontier D.A., 7 inch barrel, $25.00. .357 Magnum Colt Shooting Master and case, $150.00. All these guns are in fair to good condition. Elliott Gillespie, 4816 S. Aldrich Ave., Minneapolis 9, Minn. 7-43

REMINGTON TRIPLE HEAD RAZOR USED once, $12.00. Evinrude Zephr, Simplex starter, numerous accessories, used 7 hours, $110.00. Colt Super .38, factory grease, holster, 3 magazines, 1½ boxes ammunition, $60.00. Colt .45 Automatic barrel, new, $3.75. Stocks, $1.50. Merit Iris Disc and extension, $3.00. All kinds machinist tools and equipment. Will take spotting scopes binoculars, what have you? Charles Fornsel, 1866 Palmetto St., Brooklyn, N. Y. 7-43

SELL, 52 STANDARD #25566, SPEEDLOCK, sling, Lyman blocks, 48J, 17A, excellent to perfect, $50.00. 1,000 Long Rifle cartridges with gun, $10.00. Winchester Enfield, .30-06, as issued, very good, $30.00. Forty Kleanbore Bronze Points with rifle, $5.00. WANTED—Lyman Super Targetspot scope; give price and full description. H. M. Lockard, Greybull, Wyoming. 7-43

FOR SALE: COLTS .45 AUTOMATIC MODEL 1911, never fired, excellent or better, $50.00. J. L. Winchell, Cloverport, Ky. 7-43

BROWNING 16, 28 INCH FULL, SHELLS, NEW, $90.00. S. & W. Single Shot, holster, very good, $22.50. Fulton 20-26", M and I.C., shells, perfect, $35.00. Colt .38 Super Auto, cartridges, excellent, $60.00. Stamp please. R. E. Willard, 1736 Summerdale (Rear), Chicago, Ill 7-43

FOLDING ALUMINUM SCOPE STAND, STURDY and compact, $6.00. S. & W. .32-20, walnut grips, new 6½" barrel, patridge rear, Call bead front, blueing worn at muzzle, pull fine, inside excellent, homemade holster, Heiser belt, $50.00. H. H. Tryon, Cornwall-on-Hudson, N. Y. 7-43

PACIFIC AUTOMATIC PRIMER FEED, $2.50. WANT—7.62 Russian cartridges; Pacific .45-70, .25-35, etc., dies; Ideal No. 3-25/35 tool; Ideal No. 25727 H.P. mould; set of original target sights and pistol grip stock for Sharps Borchardt. Edward Lucas, Route 19, Box 88B, New Brunswick, N. J. 7-43

WESTERN FIELD .22 L.R. AUTOMATIC, MODEL 14M-489B, excellent, $20.00 with cartridges. WANT —.22, .25, .30 caliber jacketed bullets; Pacific scales dies, Ideal powder measure, rifle primers, air rifle and pellets. George F. Myers, Greencastle, Pa. 7-43

W70, .250-3000; 300 CARTRIDGES, TILDEN safety, sling, $100.00. 330S, Redfield Junior, $42.50. Complete outfit $140.00. All new September 1942. New Winchester 61 Octagon; Marble tang peep; 1000 L.R., $52.50. John Borland, Emlenton, Penna. 7-43

.44-40 COLT'S SINGLE ACTION, 7½ INCH barrel, ivory grips, with 50 cartridges, $35.00. .45 Colt's Single Action, 5½ inch barrel, $22.50. .44 S. & W. Russian, nickel plated, brake down, 5 inch barrel, 1 box cartridges, $20.00. .32-20 S. & W. Military and Police, 6 inch barrel, Magna grips, V.G. inside and out, $32.50. Hi-Standard Model E, heavy barrel, with holster, factory condition, $55.00. .30-06 Eddystone Enfield, 24 inch barrel, Redfield rear sight and Stoeger stock, scope blocks, $60.00. .30-06 Gov't, Buffalo Newton, 24 inch barrel, takedown, very good in, out, $50.00. Krag, 24 inch barrel, bore fair, outside good, $25.00. Winchester 97, 12 Gauge, 28 inch, modified, checkered stock and fore-end, very good in, fair out, $32.50. Gaylor Hess, 1100 Elm St., Bridgeport, Ohio. 7-43

SAVAGE 99, TAKEDOWN, NICELY CHECKED stock and forearm 20" barrel, Lyman 29½, .25-35 caliber, 80 cartridges, excellent condition, $65.00. Colt Camp Perry, 8" barrel, excellent, $65.00. Fecker Target Scope, 1⅛", 16X, mounts, optically excellent, needs blueing, $60.00. E. Roma, Jr., 224 W. Mt. Airy Ave., Philadelphia, Pa. 7-43

VIAL CUSTOM .257 ROBERTS ON MAUSER action, fully engraved with silver bear in relief. Circassian stock, Weaver 330, new, 3 boxes cartridges, $250.00. Finest English double bbl. .32 Special rifle, English scroll engraving, single selective trigger, ejectors, box case, fair, cost $1200.00, price $400.00 and cartridges. Parker 16 V.H., $60.00, good. Few boxes .38 Automatic, $2.50 box, 15, 9.3 x 72R, $6.00, 17, 8 x 57, $6.00. Roy Vail, Warwick, N. Y. 7-43

COLT ARMY SPECIAL .38, EXCELLENT, HOLster, new Sam Brown belt with loops, $46.50. Very good 6¾" Hi-Standard, walnut grips, holster, B. & M. rod, $32.50. Limited quantity .25 caliber gas checks, 50¢ hundred, Russian 7.62mm., very good bore, outside good, 22" barrel, bead front, Pacific rear on bolt, remodeled stock, 87 loaded cartridges, 64 empty cases, $28.50. Money orders. C. F. Hober, Belmont, N. Y. 7-43

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FOR SALE: BORCHARD AUTOMATIC, 7.63 caliber, stock, holster, 4 clips, special sights, perfect, $100.00. Enfield, 22 inch barrel, perfect as issued, sling, 20 cartridges, $50.00. 10X prism binoculars, leather case, excellent, $75.00. Ithaca Featherweight 12 gauge trap gun, ventilated rib, perfect, $100.00. Presentation 16 gauge double shotgun, gold, silver, and ivory inlaid, beautiful stock with cheek piece, a museum piece ready for the field, an ultra gun for the ultra sportsman, $550.00. Remington Auto riot shotgun with 25 buckshot loads, $60.00. 4 Luger 32 shot drums and loading-tool, $40.00. .30-06 cartridges in clips, $7.00 per 100; others, loose, $6.00 per 100. WANT—7.63 Mauser with 20 shot magazine, must be perfect. .44 S. & W. Special, target or triple-lock, must be perfect, will consider trades on any of above articles, except presentation gun. M. F. Ross, Indian Hollow, Red Bank, N. J. 7-43

MODEL 99R SAVAGE, .250-3000, FOLDING Marble open sight, #29½ Lyman receiver sight, Redfield Junior scope mount, brand new, but has one inch scratch at butt plate, 100 Remington cartridges, $87.50. Krag Carbine as issued, good, 60 cartridges, $27.50. .38 Army Colt, bright on outside, excellent inside, $17.50. #21 Lyman receiver sight for 86 or 95 Winchester, $4.00. # S1 Marble sight for 99 Savage, brand new, $4.00. 100 rounds Krag ammunition, $7.50. Deposit required for inspection privilege. Ford Dann, 1203 West Main Street, Marshalltown, Iowa. 7-43

WINCHESTER 52, H. B., LATEST MODEL, practically new, $55.00. Front and rear Vavers, $20.00. Winchester 94, .25-35, poor, $10.00. Some handguns, ammunition, .25 Short R.F., box .65, .22 H.P., .30 and .32 Remington, $1.50. .38-56 and .45-75 Winchester, $1.65, .303 British, 7mm. and 8mm., $2.15. .32 Winchester S.L., $2.00. .35 Winchester S. L., $2.75. Stamp please. Mashburn Arms, 918 S. Oswego, Tulsa, Oklahoma. 7-43

SELECTED M52 BULL GUN, 48 F.H. REAR, Redfield front, sling, shot less than 500 rounds, perfect condition, $85.00. M.G. extension sight, $7.00. Vaver 35 Mielt, 36 F.S., 35 EBB barrel band, $13.00. L. Weather Bee, 78 Lake Place, New Haven, Conn. 7-43

SELL—400, .44 SPECIAL BULLETS, 200 FACtory lubricated, about 190 grains; 200 Bond mould, 246 grains; 25, 44S primed shells fired once; the lot in one unit, $5.75. 500, .38 Special shells fired once, excellent, $5.00. J. E. Wellington, Box 223, Wellsville, Ohio. 7-43

WINCHESTER 21, 20 GAUGE, SINGLE TRIGger, fancy straight grip stock, 26" bbls., improved cylinder and improved modified, $95.00. Winchester 63, .22 automatic, $34.00. Both like new. WANT—Ithaca 37S, 12 gauge, 26" improved cylinder Weaver 1X. Daniel Fedory, R.F.D. #1, Schenectady, N. Y. 7-43

PARKER VH16-26 CYLINDER & MODIFIED, 2½ drop, excellent in, good out, 100 shells, sevens, $75.00. Cutler Talley, Box 1160, Richmond, Va. 7-43

WINCHESTER 94, .32 SPECIAL, 26 INCH FACtory fitted barrel, full length magazine, Lyman #21 receiver sight, folding leaf, custom cheek piece stock, very good, $45.00. Walter E. West, 329 E. Bertsch St., Lansford, Pa. 7-43

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Right: National Guard Rifle Team representing Connecticut at Camp Perry.

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ENTERING SERVICE WITH U. S. NAVY. Cleaning up large stock guns, ammunition, primers, bullets, holsters, etc. Complete list will be sent everyone who has sent dime. Any balance remaining divided into bargain lots. List dime. Wish to thank a bunch of swell fellows for their business, fine letters. It has been a real pleasure corresponding and doing business with you all. Hope to resume my gun business after H.H.&M. are completely attended to. Very Sincerely, Gordon Joslyn, CMM, CEC, USNR. Address Mrs. Gordon Joslyn, Greenfield, Mass. 7-43

COLT M.T. WOODSMAN AND AMMUNITION. Winchester 54, .30-30 and ammunition. Winchester 52, speed lock. Savage Utility, 12 gauge, .30-30. The above all better than excellent. Write for particulars. J. P. Unser, West Bend, Wisconsin. 7-43

.32-20 COLT OFFICIAL POLICE, INSIDE EXcellent, outside good, loading tool, die, holster, empties, $35.00; or trade for long Krag or Enfield, like condition. R. M. Zilla, Wolford, No. Dak. 7-43

HENSOLDT ZIELKLEIN, 2¾, GRADUATED dial, leather end caps, beautifully engraved, $50.00. 438 Lyman Fieldscope, 5A mounts, $15.00. Binoculars, Bausch and Lomb, 6X, Stereo, with case, $40.00. All items very good. WANT—.270 Winchester bullets. Forrest R. Showalter, D.D.S., 425 Chest St., Mifflinburg, Pa. 7-43

WALNUT HILL H. B. LYMAN 48, 17A, SCOPE blocks, perfect, $65.00. .300 and .250-300 Savage 99EG, unfired, 50 cartridges, $68.00-each. .45 Colt automatic, perfect, new barrel, 100 cartridges, $55.00. .30 D.W.M. Luger, excellent, fair barrel, Holster 40 cartridges, $40.00. .450 Webley, perfect 280 cartridges, $55.00. Hi-Standard "D" 6", excellent, some blue wear, Holster, $55.00. Trade— .22 L.R., for Hornets. Stamp please. Robert Nelson, 316 Third Ave., Linden, N. J. 7-43

REMINGTON AUTOMATIC .22 MODEL 550P, perfect, $25.00. Ladies yellow-gold Emerson wrist watch, 17 jewels, $8.50. Lyman 57-W, $4.50. Lucien Brault, 66 Howard St., Burlington, Vermont. 7-43

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MOSSBERG .22 AUTOMATIC, MODEL 51M. Perfect in, excellent out. Has all original factory equipment, sights including No. 4 Microclick peep sight, $27.50. H. L. Williamson, Connersville, Indiana. 7-43

SELL: WINCHESTER 1892, .38-40, TAKE-DOWN, factory perfect, half box cartridges, $35.00. Winchester 1876, .45-60, good, $20.00. Ross Canadian Service rifle, good, $15.00. Muzzle Loading Target Rifle, twenty-two pounds, false muzzle, bullet seater, no sights, good, $25.00. Newton .256 barrel only, good, $5.00. Remington .44-40 Frontier revolver, defective, $5.00. Cased Colt's London Navy with accessories, very good, $25.00. WANT—or will TRADE for Service or National Match Springfield in excellent condition. Percussion and early cartridge Colts in fine condition. W. H. Robinson, Jr., Cranberry Hill, Gloucester, Mass. 7-43

S&W .38-44, 4", PEARL AND TARGET GRIPS, shoulder holster, 50 rounds Specials, older Model rebarreled and rechambered but very good out, and excellent in, $40.00. WANT—.22-45 conversion unit or Ace. Other handguns and small lots of rifle and pistol ammunition for sale or trade. Advise me of your wants. Ed Betz, Life Member, 1510 S. Mint St., Charlotte, N. C. 7-43

SELL GOOD COLT WOODSMAN, 6½", $40.00. Good Winchester '92, .25-20, with 100 cartridges, $22.00. 350, .30-06, F.A. '34 or better, $21.00. Trade excellent Officers Model .22 for S&W Magnum like condition. Tom Street, 16300 S. Moreland, Shaker Heights, Ohio. 7-43

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CASH FOR .30-30 AND .38-40 AMMUNITION OR empty cases. Send quantity, price and sample. Have .30-06 and .38 Special to trade. Roy Meister, 7114 Greenwood, Seattle, Washington. 7-43

WINCHESTER MODEL 97, FULL, 28", RECOIL pad, 12 gauge, good as new, $45.00. Jap Arisaka army rifle, cartridge case, oil can, bayonet, and sheath, very good inside, good outside, $100.00. Remington Model 141, .35 caliber Remington. Marble tang rear, recoil pad, excellent, $55.00. Steyr Mannlicher pistol, 8mm, excellent $35.00. Model 94 Winchester, .30-30 carbine, excellent inside, good outside, $30.00. Dale Lusk, c/o P.G.&E. Co., Foot of Humboldt St., San Francisco, California. 7-43

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WINCHESTER 1912/16 SKEET, MODEL OUTFIT, about perfect, 20 boxes, $110.00. Brand new Winchester 62 S-L-L.R., 500 cartridges, $32.00; Remington 550, ditto, $34.00. Winchester '03, .22 Automatic, 7 boxes, $20.00. Lee-Enfield Sporter-carbine outfit, about perfect, 5 boxes, $55.00. Warren & Steele octagon barrel, percussion rifle, excellent. $10.00. CPPG. Rifle stock checkered, $5.00. 20 boxes, 12 gauge 7½, $40.00. 60 6.5 Mannlicher, $5.50. 80 .25-35, $7.50. 40 .303 Savage, $4.00. 20, 7.65 Mauser, $1.75. 20, .45-70, $1.50. 20, 9mm, $1.50. 250, 41 Long, $8.00. Spotting scope, excellent, $15.00. Muskie outfit, perfect, $50.00. Brand new Johnson 1939 M.D. factory crate, $75.00. Evinrude 9.7 H.P. run about 20 hours, perfect, No. 102352, $200.00. Carl Zeiss Deltrintem 8X30. C. F. standard weight, case, perfect, $135.00. Handsome Leopard head, $10.00. Deer, $15.00. Black bear rug, $35.00, all perfect, small moose head, $20.00. Bronze bison, $125.00, bear, $25.00. Member. S. Gerhardt, Jamaica Plain, Mass. 7-43

.38 COLT OFFICER 6" BARREL, HAND HONED action, $7.00. King mirror red partridge sight, $9.00. King target grips, excellent in, very good out. 50 Kleanbore cartridges for $65.00. 7.65 Luger DWM, serial 7711, 3¾" barrel, excellent in, very good out, hand stamped holster, 100 Kleanbore cartridges, two magazines, $65.00. .45 Colt automatic, perfect condition, 50 Government cartridges for $68.00. 100 shells, 28 gauge Kleanbore Nitro Club, 6c shot for $6.00. 120 rounds 7mm Mauser soft point, 175 grain, Remington ammunition, $13.20. 220 rounds 7.63 Mauser, 85 grain, Remington ammunition, $12.00. Express C.O.D. examination. Veldon H. Saul, 500 S. 5th St., Douglas, Wyoming. 7-43

FOR SALE: BALLARD RELINED .22, SHORT hammer fall, custom trigger, palm rest, adjustable butt plate, Model B5, Winchester telescope, $75.00. Ballard .32-40 Stevens Pope barrel, double set trigger, $45.00. Above rifles, very good to excellent, custom stocked, checkered, engraved. Stevens Model 44, with Winchester 52 Barrel, single set trigger; also original .32-40 barrel and block exchange. Roy A. Schultz, Monroe, Wisconsin. 7-43

FOR SALE: STEVENS 416, EXCELLENT IN, good to very good out, 500 shells, all $45.00. 100 .25 Stevens Rim Fire cartridges, black powder, $1.80. David P. Kain, R.R. #3, Muncie, Indiana. 7-43

GRIFFIN & HOWE .350 MAGNUM MAUSER, Circassian, cheekpiece, horn tip, new condition, $275.00. Waffenbrik-Mauser-Sporter, 9.3 x 62, fitted with Voightlander scope, key windage, Circassian, cheekpiece, horn tip, bought Berlin summer 1938, not made for export. A beautiful weapon complete with twelve boxes Magnum bomb cartridges, $300.00. Smith & Wesson .357 Magnum 6" barrel, factory box, perfect condition, $110.00. Three boxes cartridges, $2.50 each. George Pace, 3512 Cameron Mills Rd., Alexandria, Virginia. 7-43

160, 10 GAUGE MAGNUM 3½ INCH SHELLS. Lubaloy 2-3-4, $13.00. Dr. C. J. Miller, Ord Hospital, Ord, Nebraska. 7-43

FOR SALE—COLT WOODSMAN 6½", BEAD sight, excellent, $50.00. Colt Woodsman 6½", patridge, new condition, $60.00. Colt Official Police .22 blue, excellent in, fair to good out, $40.00. Colt Army Special, .38, 6 inch blue, pearl grips, excellent, $50.00, or K22 or 63 Winchester Automatic .22, 20 inch barrel, new condition. Jesse G. Ball, Russell, Kansas. 7-43

REMINGTON 12 GAUGE AUTOMATIC, 30", 11A, rib, perfect, 50, BB ch. shells, $85.00. Remington automatic 11A, 12-28, full, perfect, $70.00. Savage automatic 12/28, modified, excellent, 50, 7½ ch., $65.00. Winchester 61 repeater, excellent, 500 cartridges, $48.00. Enfield as issued, very good out, excellent in, $35.00. Stevens Marksman .25 caliber, fair, 500 cartridges, $20.00. B.S.A. target .22 caliber 57 rear, good out, excellent in, $45.00. Savage 23B 25-20, very good, 100 cartridges, $35.00. Winchester 67 Clay Target, new $11.50. Schutz 12X50 binoculars, very good out, perfect in, $95.00. Dr. Girard "C" scope, high mounts, very good out optically perfect, $65.00. Empty cases, .45 A.C.P. $1.00 C, .30-06 $2.00 C, .30 Remington automatic $1.00 C, 250 primed .30-06 $7.50. Ammunition 30-40 Krag 180 grain. F.M.J., $8.00 C, .45 A.C.P., $6.00, 1M .30-06 F.M.J., all good $50.00. 30-40 B&M bullet seater, $2.50. Herman Treptow, 209-11 South Main St., Milltown, N. J. 7-43

WINCHESTER 1897, 12 PUMP, VERY GOOD, $35.00. Smith & Wesson .45, 1917, 50 cartridges, excellent, $36.00. 33 Winchester, 60 cartridges, excellent, $48.00. WANTED—Smith & Wesson, light weight double or Ithaca pump. Dr. Meagher, Waupun, Wisconsin. 7-43

PERFECT WOODSMAN MATCH TARGET, 500 cartridges, sheepskin case, $75.00. Target Model 70, .270 caliber, fired 15 rounds, excellent plus, sling, recoil pad, new 10X Lyman Super-Targetspot, Lee Dot, $225.00, cartridges extra. Ithaca sixteen double, field grade, beavertail fore end, selective single trigger, M. & F., excellent plus, $100.00, shells extra. Smith Double, trap grade, 10 gauge Magnum, 3½ inch chambers, selective single trigger, F. & F., auto ejectors, inside excellent, outside V.G., $125.00, shells extra. Ithaca Seven Grade Single Trap, 34", inside excellent, outside V.G., $150.00 or trade for double of about same grade. H. C. Koch, Glendive, Mont. 7-43

MATCH WOODSMAN, AS NEW, $75.00. .44 Special S. & W. heavy duty, as new inside, fine outside, $55.00. .38 Special SAA, factory engraved, target sights, as new inside, nearly new outside, $90.00. WANTED—fine .22 S. & W. Perfected single shot. William Gray, 4333 Mercier, Kansas City, Mo. 7-43

FOR SALE—7.63 MAUSER PISTOL, MODERN walnut grips, excellent, $65.00. Colt .45 Auto, barrel perfect, excellent outside, arched housing, checkered trigger, $55.00. Colt Woodsman, excellent outside, 6½" barrel, rough but accurate, extra 4½" barrel excellent, $50.00. Silver and Colt Pearl, .25 Auto Colt in mahogany case, $35.00. .38 engraved bureau drawer special, Meriden, outside blue excellent, inside barrel rough, $12.50. WANT—early breech loading carbines and rifles. G. B. Gaumer, 4028 Parrish, East Chicago, Indiana. 7-43

MAUSER '98, 8MM, BISHOP STOCK, ADJUSTable peep, ramp, reblued, V.G., with two boxes cartridges, $55.00. Almon Williams, Berea, Ohio. 7-43

WINCHESTER 52 TARGET .22, SPEED LOCK, very accurate, separate cheekpiece, new Lyman 57F rear, 17A front, 9 inserts, Ser. #18233, drilled for scope, standard barrel, bluing slightly worn, very good, $68.00. WANTED—Hornet Winchester 70, must be accurate, outside not particular; also .22 Colt or S.&W., same condition, preferably short barrel. Dr. Roy Bakkum, Waukon, Iowa. 7-43

FOR SALE—WINCHESTER 52HB, SERIAL 32995, Lyman 48J, 17A, pistol grip, extra 10 shot clip, sling, 1½" Fecker 12½ Power with leather scope case and extra eyepiece for 18 Power. 400 .22LR Palma Match, near excellent, $135.00. 4 Power, 18" Fecker small game with ¼ min. mounts, very good, $35.00. WANT—Target Model .270. A. P. Higgins, Life Member, 1310 Third Ave., No., Great Falls, Mont. 7-43

FOR SALE: WESTLEY RICHARDS, .303 British caliber, fine gun. Knockabout and Francotte, 20 gauge. Smith custom grade, Whitworth barrels, ejector and single trigger. Sauer 12-26 6 lbs. Remington 20 Sportsman, 2 barrels. Winchester late Model 12 gauge automatic. Fox Sterlingworth 12-28. Fox Sterlingworth 12-30. Parker V.H. 12-30. Fox Sterlingworth 16 gauge ejector. Remington Model 8, .35 automatic. Winchester .218 Bee. Winchester 94, .30-30 takedown. Winchester Single Shot Hornet, fancy stock, cheekpiece, nicely sighted. Parker A.A.H. 12 gauge. Winchester 12-12-30. Winchester, 30-30 carbine. Remington .22 pump. Winchester .22 pump. Mossberg .22 Military. Savage 23 D .22. Winchester 52 Speed lock. Savage .300. Savage .250-3000. Marlin .32-20. Winchester 12-16. Stevens 12 gauge pump. Wollensack 15X40 spotting telescope. Colt .38 Officer's Model Target. S. & W. K-22. S. & W. .38 Special 5", pearl grips. S. & W. .38 top break, pearl grips. Colt .32-20, 7½" Frontier, ivory grips. H. & R. Sportsman. Model 64 Deluxe 30-30. .25, .32, .380 Colt automatic. Model C High Standard, .22 Short. Bullard .38 repeater, excellent old gun. .44 Evans sporting rifle & ammunition. Simson 12-28 ejectors. Woodsman 4½". Mossberg scope adjustable from 3 to 6 power. 2 single outboard motors, light ones. Prices on request. Harry L. White, Church St., Burlington, Vermont. 7-43

H. & R. 10", EXCELLENT EXCEPT POOR GRIPS, $25.00. Springfield .45-70, very good with bayonet, $10.00. Winchester .45-70 carbine, Lyman rear, good, $25.00. Springfield M-1 bolt complete, $10.00. TRADE—thousand 108 primers for complete Krag. Leroy Anderson, International Falls, Minn. 7-43

S. & W. 1917, $48.00. COLE .45 AUTOMATIC, $42.00. Woodsman long barrel, $42.00. .38 S. & W. Squeezer, $30.00. Extras, ammunition. Inquire descriptions. Arthur Burgess, 1343 Livingston, Columbus, Ohio. 7-43

COLT SUPER .38 AUTO, EXCELLENT WITH 590 cartridges (158 factory, 432 full-power reloads), 2 extra clips, clip holder, holster, $80.00. Money order only. F. M. Held, 440 N. West Avenue, Freeport, Illinois. 7-43

FOR SALE—BRITTANY SPANIEL PUPS. PEDIgreed and from hunting stock. Reasonably priced. The pointing Spaniel, $35.00 each. Fox Burns, P. O. Box 539, Terre Haute, Ind. 7-43

COLT WOODSMAN 6½, ABOUT EXCELLENT, $50.00. Winchester Skeet Model 12, 16 gauge, fired 7 rounds, $95.00, shells if wanted. Luger .30, good, $35.00. Ranger O.&U. 12-26, V.G. to excellent, $35.00. WANT—Hornet cartridges, .22's. Redfield 70 for 23AA. What? TRADE—Super .38 cartridges, guns. Eldon Hildabrand, Russellville, Kentucky. 7-43

FOR SALE—REMINGTON SPORTSMEN BARrel 12 gauge with compensator, 4 tubes, excellent, $30.00. WANT—book "U. S. Ordnance Vol. III" by Hicks, also Colt Ace. Francis Warfield, Severn P.O., A. A. County, Md. 7-43

FOR SALE—JOHNSON SEA-HORSE KA-9.8 H.P., excellent except few dents in tank, $175.00. Thompson TVT 12' fish boat, excellent, $75.00, or both $225.00, f.o.b. Valdosta. WANT—Browning Automatic 20, No. one or two grade excellent. P. R. Lilly, Valdosta, Ga. 7-43

52 WINCHESTER SPORTER DELUXE, NEVER fired, Weaver 330 scope with extreme low mount by Griffin & Howe, $132.50. Parker D.A.G. single trigger. 12 gauge, 28 in. barrels I.C.&M., imported recoil pad, perfect, $185.00. Hussey 12 gauge, 30 in. barrels M. & F. in English leather, beautifully fitted case, outfit cost over $1,000 and is in almost perfect condition, $375.00. Browning Sweet 16, excellent, hollow matted rib barrel, skeet bored with 10 boxes fresh Kleanbore 6s, $105.00 for all. E. Amerman, 83 Burns St., Forest Hills, N. Y. 7-43

WINCHESTER 12-16 POLYCHOKE, EXCELLENT, $65.00. 10 boxes assorted shells, $17.50 with gun only. Ammunition, .30-'06, 10 boxes, soft nose, $4.50 box. 125 metal patched, $6.00. Hornets 60-$5.00. Bee, 5 boxes, $4.50 box. .30-30 9 soft nose, $1.75. 50 metal patched, $4.00. .22 Auto. 9 boxes, $10.00. All fresh factory loads. Pair leather high top shoes, new, size 9, $12.00. Pair rubber and leather high tops, worn once, $6.00. WANTED—Winchester 12 heavy duck gun with shells. Match Target Woodsman, must be like new. D. D. Green, 100 S. Carol Blvd., Upper Darby, Pa. 7-43

MUZZLE LOADING RIFLES, FLINT LOCK and percussion, finest collection in the Middle West, all good shooting condition, prices reasonable, list 10¢. High power rifles, all purpose. With ammunition 20 to 100 rounds, Winchesters, Marlins, Sharps, Mausers, Krags, Springfields, Lebels, etc. List 10¢. Guaranteed. George Brullesauer 3957 a Castleman 10, St. Louis, Mo. 7-43

SELL OR TRADE

LOVELL VARMINTER R-2 .22, SPRINGFIELD Armory barrel excellent, Krag action good to V.G., beautiful hand-finished stock with Springfield buttplate and 1¼" sling swivels, Lyman scope blocks, and Winchester 5-A scope good to V.G., optically perfect, handsome leather scope case with shoulder strap, $50.00. Will trade. WANT—Master Target Woodsman, excellent, or Model D Hi-Standard, excellent, or similar pistol. Lt. Arthur R. Johnson, Hotel Bellerive, Kansas City, Mo. 7-43

FOR SALE OR TRADE—.45 AUTOMATIC COLT, excellent, inside and out, match barrel, King accuracy job, fitted bushing, and link, King patridge sights, shock absorber, arched housing, completely refinished, honed action, trigger stop, Sanderson thumb rest grips, extra magazine and 50 cartridges, sell $80.00 or trade for Lyman, Unertl, or Fecker, and mounts in 10, 12 or 15X. Must be excellent. F. H. Hoyt, 2315 East 5th St., Tulsa, Oklahoma. 7-43

SELL OR TRADE—STARRETT MICROMETERS with cases, 0" to 1", 4" to 5", 5" to 6", $15.00 each. All new. WANT—Binoculars, Krag, 30 Calibre bullets or what? R. Shively, 134½ E. George St., Marion, Ohio. 7-43

SELL OR TRADE: BRAND NEW UNFIRED Winchester Model 94 .30-30 plus 1 box shells. $56.00 cash, or trade for excellent to perfect Colts Single Action, .38 Special, 5¾" barrel. Lt. E. E. Sack, 3037 Austin St., Corpus Christi, Texas. 7-43

RIFLE SPECIALS

Sav. 23C .32-20.....$42.50
Win. 65 .32-20..... 51.50
Win. 65 .218 Bee..... 56.85
Win. 07 .351..... 88.10
Stevens 22/410 ..... 18.95
Stevens 240 410 O & U..... 18.95

NEW ARMY REJECT JACKETS.....$2.49
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USED ARMY M/1917 L. H. HOLSTER..... .89
USED GOVERNMENT REGULATION SLINGS, 1¼", at $.50; Swivels, 1¼", 35¢ set.

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CARL ZEISS BINOCULARS 8 X 30 INDIVIDUAL Focus optically perfect, outside good, with case, $90.00. Will trade for .38 Special Shooting Master or 52 Winchester heavy barrel or what have you? D. Scarpelli, 1128 Pleasant St., E. Weymouth, Mass. 7-43

SELL OR TRADE—KING C MELODY SAXOphone in good condition with case, silver plated, with gold plated bell, plating not worn through and no dents. Will sell for $30.00 cash or trade for firearms valued at $40.00. Raymond Rogers, Route #1, Belfast, Maine. 7-43

WOODSMAN 6½", VERY GOOD INSIDE, GOOD out, Heiser Holster, 500 Kleanbore, $30.00. LeFever Nitro Special, 16 gauge, 28" M. & F., very good, box of shells, $25.00. .44-40 Frontier, 4½", poor, case sizer, B. & M. Bullet seater, 60 cases, 250 primers, 40 lead bullets, $10.00. WANT—5 or 6X Target Scope and Mounts. .22 Caliber Jacketed Bullets. H. C. Hughes, Coalinga, California. 7-43

★Long before they went into the service many of our boys had the know-how that puts a bullet through the heart of a deer, or the skull of a wary old woodchuck at two hundred yards or more. Born huntsmen, they are accustomed to precision shooting and the precision equipment that makes it possible. NOW the sturdy Redfield Junior Scope Mount – favorite of American sportsmen – is standard equipment on American snipers' rifles. You can bet there'll be some surprised Japs and Nazis when our boys turn loose with these specially equipped rifles. And don't forget – ALL Redfield production now goes to the armed forces. We have no sights to sell for civilian use until after the war. However, we CAN send you the Redfield shooting guide and sight catalog for your sporting library. It's FREE – packed with interesting and helpful shooting information.

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SELL OR TRADE: ITHACA 12 GAUGE Sousa $1,000.00 Grade Double, Smith Premier Grade, cost $950.00; both factory condition, $450.00 each. Parker 12 D.H., good, $125.00. Smith 12 Trap Grade, $125.00. All have single triggers, ventilated ribs, large fore-ends. Remington 22, 121, Weaver 330, good, $50.00. S. & W. .38 Special, 4 inch, new, $50.00. .38 Special Hand Loads, $4.00—100. 2 Cavity Bond .38 Special Mold and Sizer complete, $12.00. The Cushion Pad Company, Lock Box 81, Sioux Falls, South Dakota. 7-43

SELL OR TRADE: 5 ACRES IN HEART OF California's last mineral frontier (Old Woman Mts.), owned outright, not a claim, mines are operating on higrade within one mile of this selected plot. $1,000.00 cash. Trade for 160 or more acres in Northern California, Oregon, Washington Mtn. land. Will allow $200.00, $300.00 each for .275, .300, .375, H. & H. in Hoffman, Mauser, Rigby, or custom rifles; $100.00 each for Model 70, 7mm, .300 or .375, same for Stoeger-Olympic, or Mannlicher stocked Enfield; $75.00 for Stoeger Standard Enfields, $50.00 for as issued Enfields. Will take any number of above to full value of property. Must be very good or better. Extra allowance for fitted scopes, tools, etc. No ammunition required. Consider any excellent rifle or shotgun, with minimum of 100 rounds ammunition. Write detailed offers; for legal description. Life member, R. L. Westmoreland, 355 So. 10th Street, Richmond, California. 7-43

COLT ARMY SPECIAL .32-20, $25.00, S. & W. .38 Special M. & P., $25.00; Ranger Skeeter Trap, $4.50, Low side-wall Winchester .32-20, $15.00; WANT—22 Target or Sporter, 22 pistol or what? Paul Popham, Herrin, Illinois. 7-43

BELGIAN BROWNING AUTOMATIC 12X26 Polychoke rib, excellent, $92.50. Parker Trojan Double 12x30 Full, good, $75.00. L. C. Smith Field 12x28 M&F, recoil pad, excellent, $60.00. Ithaca #1 Double 28x28 M&F, excellent, $65.00. Remington M14½ .44-40, excellent, $42.50. Winchester M86 Takedown .45-70, 7¼ lbs., shotgun Butt, Lyman receiver rear, perfect, $50.00. Ballard .32-40, 30# heavy barrel, excellent, $30.00. Pair D. Moore 32 R.F. Revolvers, cased, 5" barrels, good, $25.00. Genuine British Bulldog Braddell & Son 44 Webley, 3½" barrel, good, $20.00. Many others. List. Stamp. Ed Howe, Coopers Mills, Maine. 7-43

SELL OR TRADE—IDEAL IMPROVED BULLET Lubricator and Sizer; 250, 30-06, 169 grain gas check bullets, 700, 30-06 gas checks, B. & M. Bullet Seater, outfit $20.00. WANT—B. & M. Powder Measure and large Rifle Primers, N.M.N.C. Also Low Side Winchester Rifle, new stock and forearm, both nicely checkered, new #3 .22 L.R. Winchester barrel, $35.00. WANT—Winchester Hi-Side .30-40 Caliber Heavy Barrel or what have you? Frank Curatti, Black Lick, Pa. 7-43

AMMUNITION .22 REMINGTON SPECIAL, $15.00 M, H. P. $16.00. 20 boxes .25-35 @ $1.65 Factory reconditioned. Prism binocular, $35.00. Marlin .38-40, $12.00. Remington O&U Derringer, $12.00. F. Emerson, Auburn Street, Auburn, Mass. 7-43

COLT LONDON NAVY .36, FLASK, MOULD, 700 caps, fine, $35.00. Henry Griffin, R. D. #1, Bridgeville, Pa. 7-43

COLT .38 SPECIAL P.P. KING TARGET SIGHTS, hand honed, spring shoulder holster, excellent, $45.00. Marlin O&U .30-30 & 20 gauge, checkered, pad, perfect, $55.00. Remington-Hepburn, .32-40, fancy Schuetzen stock, Vernier, perfect shooting condition, some muzzle blue worn, $25.00. Remington .380 automatic, cartridges, excellent, $30.00. WANTED—Remington 121, 22 L.R. Combination gun .22 Hornet & 20 gauge, .22 Hornet or larger & 12 gauge, Weaver 330. Lucius E. Burch, Jr., 1006 Exchange Building, Memphis 3, Tennessee. 7-43

EXCELLENT .38 S&W TARGET, ROPER GRIPS, $60.00, with regular grips, $55.00. Very good to excellent DWM, 9mm, 8" Officer's Luger, exceptionably reliable, extra magazine, holster and 300 noncorrosive cartridges, $75.00. Excellent M52 Winchester Standard, slow lock, extra 10 shot magazine, sling and 500 .22 L.R. cartridges, $40.00. Winchester .22 Short, S.S. Musket, good out, excellent in, sling, adjustable peep sight, and 500 .22 Shorts, $15.00. WANTED—.38 Outdoorsman, K-22, latest Remington M37. Stamp please. J. Stiem, 3701 Euclid Ave., Berwyn, Illinois. 7-43

SALE OR TRADE—45 COLT AUTOMATIC, .32 Colt Automatic, .32 Savage Automatic, .32 Mauser Automatic, 9mm Luger, .38 S&W Regulation Police, .32 S&W Hand Ejector, 1917 S&W, S&W, H&R, & Iver Johnson .38 caliber Top break. Pair Towers hand cuffs, new, Kodak Duo-Six 20, Series II, f-3.5, Compur-Rapid, excellent, $55.00 or S&W Outdoorsman. Rifles: N.M. Star Gauge barrel Springfield as issue, 1917 Winchester, Enfield, new as issued, 94 Winchester .30-30, 92 Winchester .38-40, 65 Winchester .218 Bee 29S, Weaver .35 Remington pump. Cartridges for all. Charles H. Lawson, 89 Myrtle Ave., Edgewater, N. J. 7-43

WEAVER SCOPES IN STOCK. WE BUY, sell and trade binoculars, rifle scopes, spotting scopes. State your wants. S. A. Wentling, Palmyra, Pa. 7-43

.30-'06 REMINGTON ENFIELD, STOEGER REmodeled, 24", Pacific peep, ramp front, French walnut cheekpiece stock, checkered grip and forearm, quick detachable swivels, sling, perfect, $75.00. 205 cartridges sold only with rifle $14.00. Home made sole leather case, $5.00. Winchester M97, 12 gauge, with new cylinder 26" barrel, V.G., $37.50. Savage .32 Automatic, good out, V.G. inside, $22.00. 3X scope and mount, good, $6.50. Old Savage 99, .303, stock excellent, mechanically good, 20" poor octagon barrel, cartridges, $16.00. 87A Stevens Springfield Automatic, .22 L.R., excellent, $22.50. Kodak Jr. 6-16, F6.3, Kodak #1 Portrait lens, selftimer, lined leather case, perfect, $25.00. Kodak 6-16, F6.3, Diodak, fine, $18.00. Ideal #4 tool, .38 S. & W., good, $3.50. Set, ¼" Alphabet steel dies, good, $5.00. Fairbanks Morse D. C. generator, 750 Watt, 115 Volt, good, $20.00. WANT—Colt S.A. above 160,000, V.G. action, bore immaterial or good. .38 Special or what? No wires, stamp please. E. A. Bastel, Prairie Du Chien, Wisconsin. 7-43

SELL OR TRADE—SECOND HAND SHOOTing supplies. Fair prices paid for shooting supplies, guns, barrel blanks. All kinds of gun smithing. High class gunstocking. Ralphs Sport Shop, 407 Main St., Joplin, Mo. 7-43

TRADE 500 PRIMERS: 9½, 6½, or 1½. SELL or trade—primed cases in .30-06, .30-40, and 12 gauge brass $5.00 hundred, 1/6 motor, $10.00. WANT—.30 and .25 caliber bullets, powder measure, mike, Potter dies, and powder scales. Will pay cash. Ralph Imler, 1328 South Downing, Denver, Colorado. 7-43

COLT POLICE POSITIVE, .38 SPECIAL, 4" barrel, perfect, $45.00. 513T checkered stock, Mossberg scope, trigger shoe, excellent, $42.50. WANT—Target scope or Spotting scope for cash or trade 8X or more. C. Cruikshank, 2035 Broadway, Gary, Indiana. 7-43

COLT NEW SERVICE .45, 7½" BARREL, FAIR in, good or better out, $28.50. Good gold frame shooting glasses, $8.00. WANT—16 gauge pump or .30-'06 rifle. Frank Carter, Box 72, Briggsdale, Ohio. 7-43

SUPER-FINE BROWNING OVER & UNDERS AT less than pre-war (1938) costs. Excellent "Diana Grade," 30" F.&M., Standard Model, ventilated, SS trigger, automatic ejectors, 1-7/16" x 1⅝" x 14¾" p.g. stock, exceptional pad job, including Browning's best leather covered trunk type case, $245.00. Excellent "Pigeon Grade," 26" skeet, 1/3 choke, ventilated, Lightning Model, S.S. trigger, automatic ejectors, 1⅝" x 2¼" x 13¾" p.g. stock, Crisler two cushion interchangeable pad, including a $25 sole leather, leather-lined case, $160.00. WANTED—.30-'06 Winchester M70, 26" or 28", O&U, IC&M, Browning, SSt; 16mm movie outfit. At comparably reasonable prices. Stamp appreciated. J. Steim, 3701 Euclid Ave., Berwyn, Illinois. 7-43

COLT .45 AUTOMATIC COMMERCIAL, V.G. $42.50. Colt .45 Automatic Commercial, excellent, $52.50. Colt .32 Automatic, holster, 25 rounds, excellent, $35.00. Colt .25 Automatic, holster, 25 rounds, perfect, $29.50. Colt .32 New Police, 50 rounds, V.G., $32.50. .380 Remington Automatic, 50 rounds, good, $22.50. .30 Luger, 30 rounds, good, $29.50. S. & W. .32-44 Russian, Target Model, V.G., $35.00. 8x25 French binoculars, $25.00. 6x30 Gundlach-Manhattan Army binoculars, $49.50. .22 caliber Knuckleduster, good, $16.50. Brass barrel flintlock blunderbuss, excellent, $29.50. Matchlock pistol, excellent, $32.50. Fine pair Queen Anne type flintlock pistols, silver mounted, $49.50. Andrew Spina, 155 William St., Towanda, Pa. 7-43

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WINCHESTER M75 SPORTER, LYMAN, SLING, curly stock, 500 Longs, perfect, $55.00. WANT—S&W Kit .22, Colt 4½" Woodsman, or? M. W. Castle, 3007 83rd St., Jackson Heights, N. Y. 7-43

SELL OR TRADE—.32-20 S.W. 6 INCH BARREL, nickel, pearl grips, excellent, with primers, bullets, new primed cases, 100 of each, 60 factory loads, holster, complete Ideal tools, mould, $65.00. Winchester 65, .218 Bee, Peep, new condition, 450 Kleanbore, $65.00. Wollensak 20X, excellent, $15.00. 4 boxes .257 Roberts, 100 grain Kleanbore, $9.00. 125, .25-20 S.S., old, $2.50. WANT—B. L. Drawtube with stand. Winchester 70 Hornet, Colt Ace or Match Target, Colt .38 Special, H.B. Target; also ammunition or tools, primers. Peter Benic, 1303 Tinkers Creek Rd., Bedford, Ohio. 7-43

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TRADE—WINCHESTER 63, LYMAN 56, SHEEPskin case, new condition, with cash, for 52 Sporter, same condition. Richard Dull, 201 South LaGrange Road, LaGrange, Illinois. 7-43

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TRADE—UP TO 10,000 .22 LONG RIFLE Kleanbore cartridges for .22 Shorts on 35¢-21¢ basis. Sportsmen's Headquarters Rifle Range, Lake Arrowhead, California. 7-43

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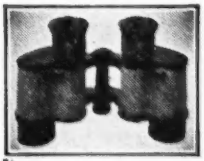

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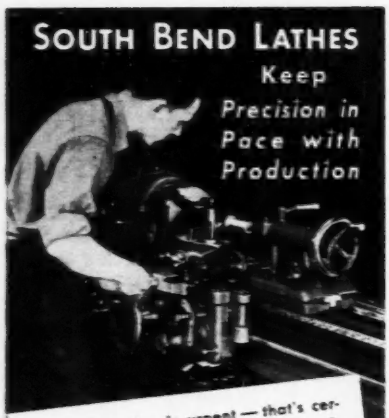

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WANTED—SPOTTING SCOPE, B. & L., N. R. A. or Argus with Freeland stand, excellent or better. Sell: Lyman 48FH, perfect, $12.50. Frank Hill, Box 389, Tracy, Calif. 7-43

WANTED—WILL PAY CASH FOR: NOSKE TYPE A-4X; 8X30 B. & L. Binoculars; 52 Sporter; .270 bullets or ammunition; .357 6" Magnum; 45 Commercial Automatic; excellent to perfect. Roy F. Knight, Connersville, Indiana. 7-43

WANTED LARGE AND SMALL RIFLE Primers, N.M.N.C. Jacket Bullets, .22, .257, .270, .30-06, almost any grain and quantity. All letters answered. State quantity and price. George J. Hall, 256 North 11th Avenue, Pocatello, Idaho. 7-43

WANTED—12 GAUGE OR RIOT GUNS, used or new. Cash waiting. Frank Klinger, Main Street, Boundbrook, N. J. 7-43

WANTED AUTOMATIC OR PUMP SHOTGUN, any size, or good Double. Winchester Model 70 Hornet, Winchester Model 52 or Woodsman. Burton Rand, Bryantville, Mass. 7-43

WANTED—ANTIQUE FIREARMS, EDGED weapons, cartridges, gun books, powder flasks. Will buy entire collections. Cash. H. W. Cleveland, 1712 Ohio, Long Beach, California. 8-43

WANTED TO BUY FOR CASH: GUNS AND Ammunition. Alliance Gun Exchange, Alliance, Ohio. 7-43

WANTED—30-06 SPRINGFIELD RIFLE AS issued must be perfect and number above 1,500,000. P. J. Boberg, 1150 Hibernia Bank Bldg., New Orleans, La. 7-43

WANTED—SMITH AND WESSON .357 Magnum, any length barrel, preferably 8⅜". Remington Arms Co., Inc., Purchasing Dept., Bridgeport, Connecticut 7-43

WANTED—CASH FOR CAMERAS, BINOCulars, Telescopes, Firearms. Good Guns wanted in trade. National Camera Exchange, 11 So. 5th St., Minneapolis, Minn. 7-43

WANTED—LUGER, .30 CALIBER OR 9MM., barrel 4" or more, fair or better. All letters answered. M. Zubatkin, Co. B, ASTU-3408, Georgia Tech, Atlanta, Georgia. 7-43

WANTED—LYMAN ALASKAN; .357 MAGNUM; .30 Gas Checks; .22 Revolver; .22 Automatic; .45 Automatic; Primers. Hadley Stephens, 830 Cordova, Ocean Beach Branch, San Diego, Calif. 7-43

WANTED—CASH FOR YOUR FINE AND beautiful guns. Hershey's, Orrville, Ohio. 10-43

WANTED—ABOVE EXCELLENT, LATE SERIES M52 Sporter; 330 Weaver Scope, Cross-Hair, with or without Redfield Mount; Hornet Ammunition and Components; .22 Long Rifle high speed hollow points; for cash or will trade the following: above excellent, late series M52 HB, few rounds, Lyman Blocks, Lyman Iron Sights, in wooden carrying case; a few .38 Special Wad Cutters; a few small Pistol Primers. John W. Thorp, 354 E. Cypress, Burbank, California. 7-43

WANTED—SMITH WESSON LEVER ACtion pistols; also Smith Wesson .44 rimfire. Charles Fritz, 2169 Glenside, Norwood, Ohio. 8-43

WANTED—7 QUART PRESSURE COOKER, good condition. State price and details. J. A. Droege, Room 902, 466 Lexington Ave., New York City, N. Y.

WANTED—EXCELLENT OR BETTER, S. & W. Magnum, 6 inches or less, with Cartridges; .38 Detective Special; .22 S.&W. Kit gun. Robert Redner, Sunset Beach, California. 7-43

WANTED—WILL PAY $10.00 PER 1000 FOR 5000 9½ or 8½ Primers; also good price 22 jacketed bullets, any amount. Rex Gun Shop, Odessa, Texas. 7-43

WANTED—RIFLEMAN, BOUND VOLUME FOR 1941, good condition. Write price, etc. J. J. Egan, Jr., 52 Crescent Rd., Quonset Pt., Rhode Island. 7-43

WANTED—WILL PAY $10.00 PER M FOR .22 Long Rifle Cartridges; $8.00 for Shorts; $1.50 per box for 12, 16, 20; $1.40 for .410, three inch; $1.30 for 2½, 4, 5, 6, 7 Shot; plus express. Need few boxes .32 Automatic Pistol Shells. Ray Randolph, 3943 Delaware, Gary, Indiana. 7-43

WANTED FOR CASH—SHOTGUNS, Rifles, Pistols and Revolvers. Can use all makes and types. Describe guns fully in first letter, state price, all mail answered. Big Ben Mercantile and Loan Co., 179 Third Street, San Francisco, Calif. tf

WANTED—CANADIAN WANTS .30-06 WINchester Model 70; also 4½" Woodsman from someone living in Canada. Cpl. L. Parker, R.C.A.F. #15 E.F.T.S., Regina, Sask., Canada. 7-43

WANTED—WILL PAY FAIR PRICE FOR HiStandard Model HE or HD. Advise condition and price. Harold Burnham, 110 No. Olive Avenue, West Palm Beach, Florida. 7-43

WANTED—HORNET AMMUNITION, JACKETED Bullets, Primers, Gas Checks, Ideal Bullet Sizing Chamber or sizing dies #225458 for Lubricator & Sizer. #1½ Primers. FOR SALE—65 .22 Short Chambers, Springfield Gallery, 25c each. Edmund Fickert, Toms River, New Jersey. 7-43

WANTED—ZEISS 10 X 50 and 8 X 40 BINOCulars. Sidney Morris, Jackson, Wyoming. 7-43

WANTED—TARGET TELESCOPE WITH ¼ minute mounts; Winchester 94 rifle .25-35. Allan McNeil, 320 Wisner, Alpena, Michigan. 7-43

WANTED—COMMERCIAL OR NATIONAL Match 45 Automatic Pistol, excellent or perfect. Don Hopkins, E. 831 Rockwood Blvd., Spokane, Washington. 7-43

WANTED—COMPLETE .44 SPECIAL, .45 AUTOmatic, 30-06 Reloading parts for Meopos Reloader. .44 Special Mould. .35 Remington Cartridges, Rifle and Revolver Primers. H. G. DeWeese, 403 Sala Avenue, Westwego, Louisiana. 7-43

WANTED—ENGRAVED AMERICAN POWder Horns, preferably dated and signed. Herman P. Dean, P.O. Box 1340, Huntington, West Virginia. 9-43

WANTED—REMINGTON AUTOMATIC 12. Browning Over-Under; Kodak 35, Coupled Range Finder; Exposure Meter. All very good or better. Describe fully. Clarence Cubbedge, Orlando, Florida. 7-43

AMMUNITION WANTED, SMALL OR large quantities: .30-30; .32 Special; .35 Remington; .30-06; .300; .22's. Send description and best cash price. The Jaymac Co., Jackson, Mich. tf

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WANTED—32 GAUGE SHOTGUN SHELLS OR castings. M. J. McDermott, 30 N. LaSalle St., Chicago, Illinois. 7-43

WANTED—OUTBOARD MOTORS, USED or new, any make or size, will pay cash. Frank Klinger, Main Street, Boundbrook, N. J. 7-43

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WANTED—PRISMATIC SPOTTING SCOPE, B. & L. or Argus Special. Must be excellent to perfect condition. M. E. Hutton, 222 South Mariposa Ave., Los Angeles, California. 7-43

WANTED—BARRELS FOR STEVENS, BALLARD or Borchardt action in calibres .22-10, .22-15-60, .25-25, .25-20-SS. Also 044½ in any of these calibres. W. F. Drews, 1403 Forest Avenue, River Forest, Illinois. 7-43

AMMUNITION, ALL TYPES WANTED. State condition, age and caliber, High prices paid. Make offer. Stoeger Arms Corporation, 507 Fifth Avenue, New York, N. Y. tf

WANTED—S. & W. .22 KIT GUN, MUST BE excellent. Lt. A. Mozer, 18th Antisubmarine Sqdn. (H), Langley Field, Virginia. 7-43

WANTED—S. & W. K-22 MASTERPIECE AND S. & W. Magnum, excellent to perfect. For personnal use, member. Fred H. English, English Studio, Jefferson City, Mo. 7-43

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WANTED—ITHACA DOUBLE, 12 OR 16 GAUGE, Sousa Grade *only*, single trigger, improved cylinder preferred. For Sale: C.H.E. Parker Double, $150.00. J. E. Mann, Jr., 2117 8th Street, Lubbock, Texas. 7-43

WANTED—MODEL 54 OR 70 WINCHESTER .22 Hornet, very good to perfect; give complete description with amount of ammunition and accessories; also sale price. Clifford E. Adams, 415 Grant Street, Mercer, Penna. 7-43

WANTED—KODAK CAMERA SIZE 116 OR 120. Harold P. Klein, West Bend, Wisconsin. 7-43

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WANTED—ONE M70 WINCHESTER HORNET, Standard Grade, 24 inch barrel, condition excellent, with ammunition. Jno. F. Ross, Shelby, Miss. 7-43

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WANTED—COLT ACE, FLOATING CHAMBER preferred, or .22-45 conversion unit, or .45 Automatic with conversion unit. Chas. L. Colbert, 1040½ Victoria Ave., New Kensington, Pennsylvania. 7-43

WANTED—PACIFIC DIES AND SHELL HOLDER for .30-30, bullets, primers and powder. Lyman Alaskan with or without rifle. Model 70 Winchester, 375 Magnum. George N. Lathrop, Life Member, Bristol, Vermont. 7-43

WANTED—KRAG BREECH BOLT, PREFERAbly without firing pin, etc. Ben Long, Box 373, Parsons, West Virginia. 7-43

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WANTED—H. B. MARTINI .22 L.R. TARGET rifle. Must be excellent inside. Condition of finish and stock immaterial. Also want V.G. Winchester 62 or Marlin 39. Burl Ledbetter, Box 944, Clovis, N. Mex. 7-43

WANTED—WINCHESTER M-54 OR 70 ACTION, complete, in perfect condition. Wanted .220 Swift 45 & 55 grain bullets, W-M-8S or factory. Leonard L. Musel, 2020 Carey Ave., Cheyenne, Wyoming. 7-43

WANTED—FOR CASH: AMMUNITION, any quantity, all calibers. Write Public Sport Shops, Dept. R-62, 13 South 16th Street, Philadelphia, Pa. 7-43

WANTED—UP TO 1000 SMALL N.C.N.M. RIFLE primers and .25 caliber, 87 grain bullets. Owen D. Kelly, 7259 Upland Street, Pittsburgh, Pa. 7-43

WANTED—WINCHESTER LEVER ACTION shotgun, 10 gauge, with action OK, barrel immaterial, cheap. Also want empty 10 gauge brass shells. M. J. Albert, Cedar Falls, Iowa. 7-43

WANTED—LATE MODEL JOHNSON OUTboard motor, not over five horse, state model, condition and best price. William Horalek, Centralia, Kans. 7-43

WANTED—.38 SPECIAL DIES COMPLETE FOR Meepos reloader, or improved tool. Don Wallace, 25 Adam St., Lockport, N. Y. 7-43

WANTED—LYMAN ALASKAN, WEAVER 330, 1X scopes and Remington .30-'06. W. E. Plamann, Appleton, Wisconsin. 7-43

WANTED—BY YORK, PA., CITY POLICE DEPT. Good to perfect .22 caliber revolvers. K-22's, O.M.T.'s, or O.P.'s, desired only. Do not ship arms until notified. Advise complete description, condition and prices in letter addressed to Life Member R. C. "Bob" Geesey, Bureau of Police, York, Pa. 7-43

WANTED—70'S: '06 STANDARD; .220 SWIFT, .300 Magnum Bull, Pacific dies, ammo; shooting Ray-Bans. Cash. TRADE—.70 Hornet, ammo; Match Target Woodsman, 75 Target, ammo. All excellent to perfect. Stamp please. J. A. Sheridan, 39 N. Brandywine, Schenectady, New York. 7-43

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WANTED—BROWNING OVER & UNDER, MARlin Over & Under, Hornet or .22-410 combination. Inman Turpin, 3225 Spottswood, Memphis, Tennessee. 7-43

WANTED—VARMINTER OR K-HORNET AND components, .70-06 standard or target, components if any, or any M70 barrel, immaterial, describe fully, replies answered. C. McGuckin, 627 13th St., Huntington Beach, California. 7-43

WANTED—.30-'06 SPRINGFIELD OR ENfield as issued, also Bayonets. Robert Abels, 860 Lexington Ave., New York. 7-43

WANTED—FOR CASH, EXCELLENT TO PERfect, Colt .45 Automatic and 20X spotting scope; also .22 L.R., .38 Special and .45 ACP Ammunition. Oliver Cote, 3121 16th St., N. W., Washington, D. C. 7-43

WANTED—BELDING AND MULL VISIBLE powder measure. Will pay fair cash price. Joe Fingal, 414 Maryland Avenue, Wilmington, Delaware. 7-43

WANTED—HEAVY TARGET BARREL IN PERfect condition for Remington-Hepburn action, caliber immaterial; lower pistol grip-tang with complete set triggers for Stevens 44; Ballard, Winchester, Stevens Schuetzen rifles or actions. Chester Nikodym, 1615 NBC Bldg., Cleveland, Ohio. 7-43

WANTED—AUTOMATIC PISTOLS, .22, .32 and .45 caliber. Warshal's, First and Madison-BB, Seattle. 7-43

WANTED—PERFECT 4X OR 6X ZEISS OR Hensoldt scope, internal adjustments preferred. Excellent to perfect .38 Special OMT HB or Shooting Master. Excellent to perfect M52 target, standard barrel with or without sights. Personal use NRA member. R. E. Hartman, 201 Levert Ave., Mobile, Ala. 7-43

WANTED—BADLY, JACKETED BULLETS: .22, .25, .30 and .35. C. W. Southworth, New Hartford, N. Y. 7-43

WANTED—10,000 6½ or 116 PRIMERS, WILL pay $10.00 per 1000, ship collect express any amount Lic. #170023. Rex Rogers, Odessa, Texas. 7-43

WANTED—CARL WALTHER OLYMPIA AUTOmatic .22 Short Target pistol. Fred Hostettler, 62 School St., Hartford, Conn. 7-43

WANTED—SHARPS BORCHARDT ORIGINAL "Long Range" model and Phoenix sporting type, also Winchester engraved Single Shot Hi-Wall. F. P. Sargent, 18753 San Diego, Birmingham, Mich. 7-43

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WANTED—6X LYMAN JUNIOR TARGETSPOT. D. S. Hopkins, E. 831 Rockwood Blvd., Spokane, Washington. 7-43

WANTED—EXCELLENT COLT WOODSMAN, 4½" preferred. Excellent heavy Winchester 52 or similar barrel only, suitable for Lovell. Letters answered. F. A. Good, 1695 Wagner, Pasadena, Calif. 7-43

WANTED—EXCELLENT WINCHESTER HIGHside Single set trigger action; also Springfield or Enfield '06 action same condition, pay cash. H. R. Cornell, 1047 Horners Lane, Baltimore, Maryland. 7-43

WANTED—.22 HORNET AND AMMUNITION or components. What have you? E. C. Street, Waco, Texas. 7-43

WANTED—LATE MODEL 52 H. B. or REMington 37. Cash or have Colt .45 automatic to trade. W. J. Costello, Box 1209, Charlotte, N. C. 7-43

WANTED—.45 COLT, CARTRIDGES; .45 COLT, 300, H.&H. new, primed or used cases. Wm. Warga, 6519 W. Fairview Ave., Milwaukee, Wis. 7-43

WANTED—COLT BISLEY, BARREL CONDITION immaterial. 12 gauge primed empties. Savage M20 action. Colt S.A. Ernest Baldwin, R.D.1, Trenton, N. J. 7-43

WANTED—SPORTSMEN WHO ARE WONdering where to buy their pet brand of ammunition. All handloads and ballistically perfect: non-corrosive of course. Also help us help the rest of the boys by selling us—cases, .30-30, .348, .32 Winchester Special, .270, .300 Savage, Bullets .30-30, .32 Winchester Special, .300 Savage. Primers, shotgun, #209 Winchester or #57 Remington. Want late model Johnson outboard 2½ or 5 horse. Jim Clark Sporting Goods, 2029 W. Fondulac, Milwaukee, Wis. 7-43

WANTED—WINCHESTER 52 WITH HEAVY Stainless Steel barrel. Must be in very good condition and very accurate. Describe fully, stating price. Will pay cash. Lt. Frank A. Hall, Camp Ordnance Office, Camp White, Oregon. 7-43

WANTED—1000 GAS CHECKS .30 CALIBER, 500 large rifle primers, 500 large pistol primers. Bullets any weight, and mould for .30-'06. State kind and price, all letters answered. L. F. McMains, 5246 N. E. Cleveland Ave., Portland, Oregon. 7-43

WANTED—ACE PERFECT INSIDE, .30-30 shells, 440 Weaver, Lyman Alaskan, Red post sight for Sedgley .30-'06 Sporter. D. F. Gowen, 322 Plant, Tampa, Fla. 7-43

WANTED—FOR CASH WINCHESTER MODEL 75 Sporter, must be excellent. Will answer all correspondence. C. A. Renouf, Rt. 2, Box 912, Porterville, Calif. 7-43

WANTED—CASH FOR .250-3000 and .32-20 dies for Jordan press, Mauser set triggers, B.&M. visible powder measure, .32-20 Savage Sporter, .25 caliber gas checks. T. Finell, Box 394, Marshfield, Oregon. 7-43

WANTED—FOLLOWING AMMUNITION: .45-70, .50-70, .45-75 black powder, .45 black powder for frontier, .380. Dave Babcock, 51 Oakdale, Pleasant Ridge, Mich. 7-43

WANTED—COMPLETE BOLT ASSEMBLY, RECeiver sight, cartridges, primers, for 98 GEW military Mauser. Lester Farnum, Manchester Depot, Vt. 7-43

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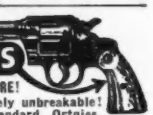

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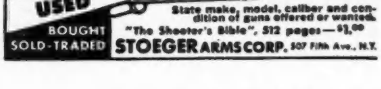

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SUPERWAX PRESERVES, WATERproofs canvas, rope, leather goods. Waxes skis. Finishes wood. Prevents rust. 1½ lb. cake, $1.00. Circular free. Superwax, Box 1492-V, Milwaukee, Wisc. 7-43

SOFT LEATHER GOLF WOOD COVERS, $1.10 prepaid, set of three. Fishing Reel 250 yard Pflueger Tempco Star Drag, brand new, $3.95. Decoys, special sale, Mallard Drakes and Hens, $1.29 postpaid. .30 caliber 1 piece brass cleaning rods, $1.25 each. Iron Dumb Bells from 2 to 25 lbs., 25¢ per lb., shipped express charges collect. Public Sport Shops, Dept. R-62, 13 South 16th Street, Philadelphia, Penna. 7-43

COMMANDO KNIVES, 7¼" RAZOR SHARP, double edge bayonet blade of finest steel, with guard, hunting knife handle of leather discs, sturdy leather sheath with leg thong. Supply limited, order now, $10.00, prepaid. Louis F. Loutrel, 95-16 105th St., Ozone Park, 16, New York. 7-43

SALE OF SURPLUS GOVERNMENT Goods. Whelan Oiled Rifle Slinge, 1", brand new, $1.50. Whelan Rifle Sling Straps. 1¼", brand new, $1.65, Swivels 75¢ per pair. Springfield Sight Gauges, $1.00. .30-06 Empty Brass Cases, 75¢ per hundred. Brass Clips for .30-06 Cartridges, $2.00 per hundred. Canvas Canteen Covers, fine condition, 25¢. U. S. Army Military Haversacks, fine condition, 60¢. Public Sport Shops, R-62, 13 South 16th Street, Philadelphia, Penna. 7-43

RECEIVED TOO LATE TO CLASSIFY

WANTED—WILL PAY FAIR PRICE PER 10,000 any kind .22 rim-fire ammunition. Send any amount C. O. D. express. All shipments fully guaranteed. Don't sell until you write or wire me first. WANT—Mauser Anti-Tank gun. Life Member, N.R.A. Capt. Howard J. Knutson, P.O. Box 1313, El Centro, California. 7-43

HENSOLDT BINOCULARS 8X24, ARTILlerie, excellent, with case, $50.00. J. Duffy, 1321 Delafield Place, N. W., Washington, D. C. 7-43

SELL OR TRADE—6" COLT ARMY SPECIAL .38, 50 shells, $22.50; 1892 Winchester .25-20 and tools, $20.00; Stevens 6" offhand, $15.00; Iver Johnson .410 double, $25.00; 9-mm Erfurt Luger, 15 cart, $30.00. WANT Winchester .32 SL; K-22 or .22-32. Stamp. E. I. Lawton, Victor, Iowa. 7-43

MAUSER 98 ACTIONS, $18.00. MAUSER '98 actions matched numbers, $20.00. Mauser 8-mm barrels, $4.00. .30-06 MC ammunition late date, $7.00, 100, .30-06 blanks, $4.00, 100, Military parts, list free. Flaig's Hunter's Lodge, Millvale, Pennsylvania. 7-43

FOR SALE OR TRADE—L. C. SMITH TRAP grade, 20 gauge, 32" F. & F., ventilated rib, Beaver Tail forend, selective Single Trigger, perfect, cost, $225.00. Sell for $150.00 or Trade for gun or guns of equal value 12 or 16 gauge. Jim Craton, Life Member, Davenport, Iowa. 7-43

FOR SALE: .303 SAVAGE RIFLE, PERFECT CONdition, $67.50. Ralph Smith, Clay Center, Kansas. 7-43

WANTED—257 REMINGTON BARREL, VERY good condition. Ed A. Harms, Warren, Oregon. 7-43

WANTED—PACIFIC DIES OR BELDING AND Mull tool, dies and components for .220 Swift. Kenneth Owens, Grove Avenue, Lewistown, Pa. 7-43

WANTED—PRIMERS, SMALL PISTOL, LARGE pistol, large rifle, .30 caliber bullets in 74, 80, 85, 93, 100, 110, 115, 125, 145, 150 grains. Ideal, Bond or Pacific powder measure. Pacific .38 Special dies. Bullet moulds. Bullet sizing dies for Lyman sizer, lubricator, .22 and .38 Officers Model, .22 Long Rifles. Name your price. Have—K-22, Super .38, 4½" Woodsman, small rifle primers. All excellent or better. Will trade or sell. Details on request. L. DeSaye, Turner, Montana. 7-43

.45 COLT AUTOMATICS, MECHANICALLY perfect, one very good appearance, $60.00, another good, $55.00. Navy binoculars, 6X30, Bausch & Lomb lens and prisms, spotless leather case, $60.00. John Nolan, 154-33 12th Road, White Stone, N. Y. 7-43

WANTED—JOHNSON 2½ or 5 HORSEPOWER late model outboard motor. Jim Craton, Life Member, Davenport, Iowa. 7-43

SELL TWO PERFECT 330S WEAVER SCOPES, cross hair reticules, $30.00 each. E. Coziah, Box 135, Cokeville, Wyoming. 7-43

WANTED—.22 SHORT, LONG, LONG RIFLE cartridges; also .50-70. Harris Pettee, R.F.D., Bristol Highlands, R. I. 7-43

WINCHESTER 94, .30-30, NEW BARREL, 60 loads, $50.00. Winchester 37, 28 gauge, new, $15.00. Mossberg 410 gauge, 3" single, 50 loads, $12.00. Stevens 12 gauge single, 25 loads, $16.00. Winchester 70, .220 Swift, 100 loads, $100.00. Mauser 98, .220 Swift, 100 loads, $100.00. Winchester 12, 12-28, $60.00. S&W .38 Special, engraved, $60.00. High wall custom R-2, 100 loads, $50.00. WANT—54 or Springfield, .257 or '06. W. C. Barnhart, Box 74, New Carlisle, Ohio. 7-43

WINCHESTER 95, .35 CALIBER, NICKEL STEEL barrel, Lymans, as new inside, excellent outside, except for worn blue on receiver, $45.00. E. W. Robbins, Milford, Mass. 7-43

NEW STEVENS SPRINGFIELD 20 GAUGE single barrel, $13.75. 4 boxes assorted shells, $2.00 per box. New Savage Model 219 Single Shot rifle .25-20, $19.95. Super X soft point cartridges, $2.50 per box. Jim Craton, Life Member, Davenport, Iowa. 7-43

DESIRE TO PURCHASE: .22-45 CONVERSION for regulation .45 Colt automatic. Lt. L. G. Kaye, NAS, Corpus Christi, Texas. 7-43

WINCHESTER MODEL 12, 12 GAUGE, 30" barrel, full, leather case, new condition, $65.00. Man's coon skin coat, size 40, excellent condition, northern pelts, $75.00. Man's bicycle, like new, $40.00 or trade. George H. Diddens, Freeport, Illinois. 7-43

WANTED—12 GAUGE AUTOMATIC REMington shotgun, Browning "Sweet Sixteen," Colt Ace, .357 Magnum, 8¾", Woodsman 6½", Colt Super .38 automatic, .22 long rifle ammunition, 12 gauge shells, Winchester 21, 20 or 16 gauge. Harry L. White, Church St., 13, Burlington, Vermont. 7-43

S. & W., M & P. 6", .38 SPECIAL, ONE TARGET, $60.00. One Plain, $50.00. One Henshaw trigger, $1.50. One Wesson adapter $2.50, One Magna Stocks $1.25. Winchester S.L., .32 new barrel, $50.00. 6 boxes ammunition, $6.00. All in factory condition. 800 .30-06, sized, Frankford shells, primed, fired once, $1.50 hundred. Clips 1¢ & 2¢ each. A. E. Johnson, 328 Farragut St., Washington, D. C. 7-43

WANTED—JR. TARGETSPOT 6-8-10X. 12 gauge Sizing die, Lyman re & Decapper for shot shells, rifle and pistol cartridges any quantity, jacketed bullets, large and small primers. Herman Treptow, 209-11 South Main St., Milltown, N. J. 7-43

LEITZ 8X60 BINOCULAR, CENTER-WHEEL focus, excellent to perfect, cost over $350.00. Sell for $250.00. Sedgley .219 zipper, heavy barrel, single action, barrel and action perfect, stock fair, scope blocks, $60.00. WANT—.22 caliber and .38 caliber target pistols, .22 caliber ammunition. Modern Gunsmithing Complete Guide to Handloading, others, books. John A. Henrich, 35 Riverside Avenue, Lancaster, Pennsylvania. 7-43

WANTED—MODEL 24 or 12 SCHMITT TOOL; also dies for .38 Special, .44 Special, .45 ACP, .30-06, .30-40, and Hornet calibers. William Marble, 11 Miquon Road, Conshohocken, Pennsylvania. 7-43

WANT—.22 ammunition, any amount, 5X or 6X scope, 6" .22 handgun, .250-3000 cases. See my Sell or Trade ad. Melvin Conrad, Indiana, Pennsylvania. 7-43

SCHEUTZEN MUZZLE LOADING SLUG RIFLE .43 caliber palm rest, 18 lbs. Burlex stock, checkered grip, false muzzle, bullet starter, patch cutter, molds, swages, peep sights, excellent in V.G. out, extras, $80.00. TRADE—.25 caliber mauser automatic pistol, fair, for what? N. L. Hubbard, 628 Hollibaugh Avenue, Akron, Ohio. 7-43

FOR SALE OR TRADE—S. & W. .38 SPECIAL M. & P., new, $32.50. Remington .41 Derringer, excellent, $17.50. Belgian Cowboy Ranger, .38, good, $7.50. Remington .22 L. R. Model 241, excellent, $30.00. Ammunition for all of these. WANT—.25 bullets or ? Homer E. Reid, Box 478, Telluride, Colorado. 7-43

WANTED—12 OR 16 GAUGE WINCHESTER Model 12, Remington or Browning automatic. Jim Craton, Life Member, Davenport, Iowa. 7-43

.300 SAVAGE 99EG, PERFECT, SLING, 17 cartridges $57.50, .30-06 Springfield Sporter, low number, issue sights, DCM stock, excellent, $50.00, issue Krag, perfect bore, good outside, sling, $30.00, .30-06 Enfield (Winchester) perfect, Pacific rear, otherwise as issued, sling, some ammunition, $57.50, .38 Officers Model, 7½", excellent bore, very good outside, bead sights, $50.00, .45 S&W 1917, good, $35.00. Money orders only. E. R. Thomson, 23 Pickney St., Greenville, S. C. 7-43

.45 GOVERNMENT AUTOMATIC, NEW BARrel, reblued two extra magazines, Heiser holster, magazine pouch, 400 Stainless cartridges, $65.00. Certified check or money order, E. S. Duncan, Essex, Connecticut. 7-43

TRADE—BELGIUM BROWNING, OVER UNDER, 12, skeet boring, raised rib, single trigger, automatic ejectors, very good, for high grade single, trap gun. Thomas Buchman, Stevenson, Maryland. 7-43

WILSON WILL TRADE ANY GUN IN stock for automatic pistols in .32, .380, .45 and .30 caliber and 9-mm Luger. Send for latest trade list. None for sale for cash. Wilson's, 3082 W. 25th St., Cleveland, Ohio. 7-43

WANTED—TUBE SIGHT WITH PRECISION mounts. Fancy Circassian blanks for S. S. target rifle, Remington 37 and mannlicher sporter. Basil Tuller, Galeton, Pa. 7-43

WANTED—WINCHESTER MODEL 52 SPORTER and Zeiss Zielvier scope. Louis Lutfy, Professional Building, Phoenix, Arizona. 7-43

WANTED—GOVERNMENT .45 AUTOMATIC, for cash. Alexander Shaw, 1207 Shady Ave., Pittsburgh, Pennsylvania. 7-43

.45 COLT AUTOMATIC M1911 PERFECT IN, new barrel fired only lead bullets, excellent out, official holster, belt, clip-pouch, ammunition, $45.00. S.A.A. .44-40 7½", white grips, very good out, fair in, but accurate, ammunition, $25.00. James DeYarman, 216 20th St., Cedar Rapids, Iowa. 7-43

FOR SALE: REMINGTON-WALKER .3240 Scheutzen, false muzzle missing otherwise practically new condition, $200.00. Zeiss variable power telescope "Aseros", 4 to 20 magnifications, new condition, leather case, accessories and heavy tripod, $225.00. Cooke "Tellic" F-5.6, 15 inch focal length Telephoto, perfect, $160.00. J. C. Nix, 4416 P Street, N. W., Washington, D. C. 7-43

FOR SALE: TANNED BUCKSKIN DEER AND elk hides, ready to make in clothing and gloves, stamp please. L. D. Vaughn, Thermapolis, Wyoming. 7-43

WANTED—COLT NEW SERVICE .38 SPECIAL or .44-40, excellent or perfect, ammunition. John P. Dunbar, Keyes St., Warren, Mass. 7-43

FOR SALE—LYMAN 52W EXTENSION, $7.50. 77 front $2.50. Marble Goss rear for round receiver 52, $6.00. WANT—Target scope. Bert Young, 320 Lincoln, Ottumwa, Iowa. 7-43

TRADE—NEW NEVER BEEN FIRED COLT .32 automatic pistol, holster and extra barrel. TRADE—For S. & W. Straightline with box, tools and shells. Fred Easton, 4835 Hurlbut, Detroit, Michigan. 7-43

B. & L. PRISM BINOCULARS, 6X30, INDIVIDual focusing, in leather case, $50.00. Check or money order. Mrs. J. J. Wolford, Oxford, Ohio. 7-43

TRADE—1000 .22 L.R. REMINGTON FOR equal number #8½ or equivalent NMNC primers. Fletcher Young, 217 Lewis Avenue, East Lansdowne, Pennsylvania. 7-43

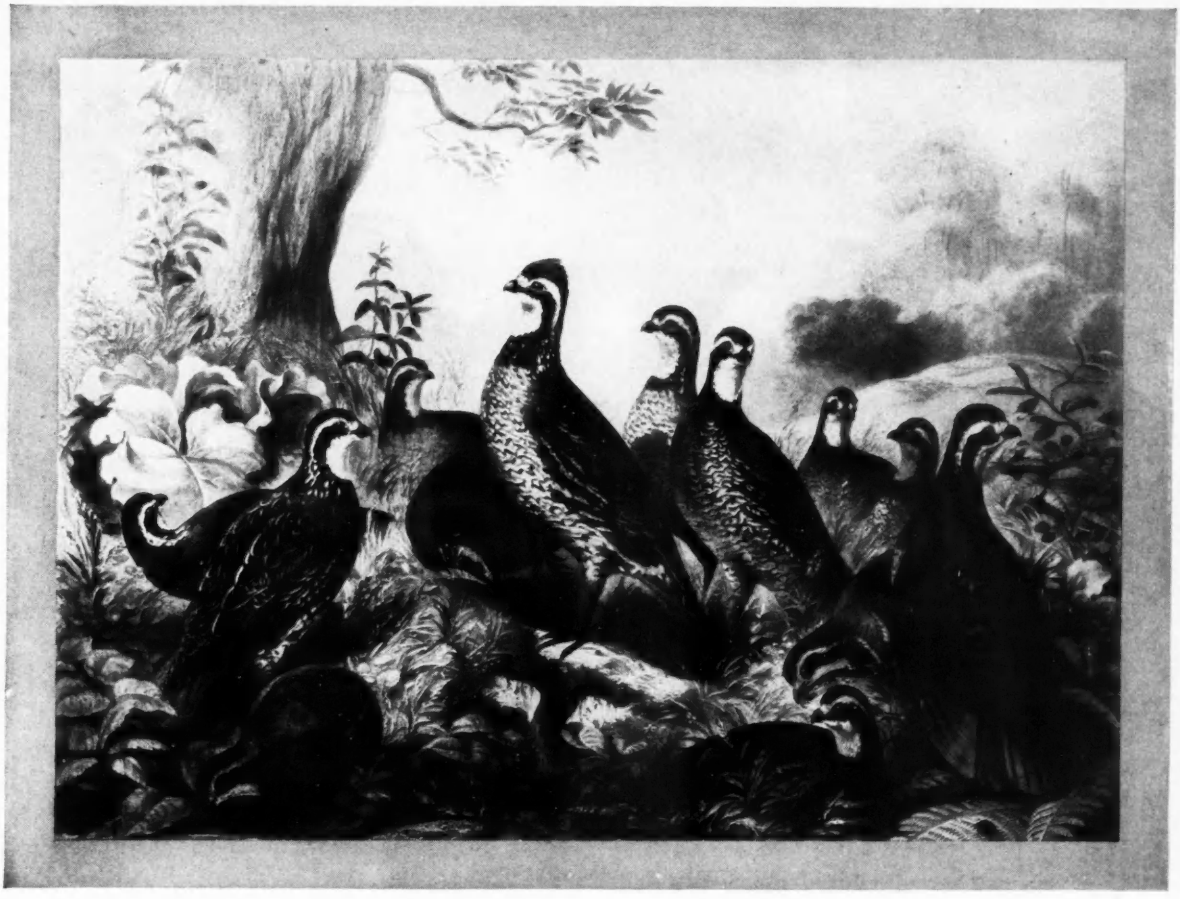
WANTED—ANNIE OAKLEY, WOMAN-AT-ARMS by Courtney Ryley Cooper and any gun formerly owned by Annie Oakley. Also perfect Super Targetspot. Paul Wahl, South Street, Bogota, N. J. 7-43

WANTED—EXCELLENT OR BETTER, RECENT Colt .25 Automatic, cartridges. .22 Banker's Special. Robert Redner, Sunset Beach, California. 7-43

WANTED—FOR TESTING AND EXPERIMENTing. Redfield Junior Mount for 330 Weaver to fit Springfield. .250-3000 Winchester or Western empty cases. .22 caliber Sisk or W.M. express bullets. Major S. Leslie, Box 81, U. S. Army Post, Fort Thomas, Ky. 7-43

WANTED—STANDARD 70 SWIFT BARREL, new, .22-32, K-22, Reising, Woodsman, Kit gun. Excellent or better. 40 rounds .250-3000. Remington Model 8, poor, cheap. Cash. Paul Hartman, c/o Grant Cline, Ennis, Montana. 7-43

WANTED—LYMAN TARGETSPOT OR SUPER targetspot; must be in perfect condition and reasonable. A. Hubalek, 1167 Myrtle Avenue, Brooklyn, New York. 7-43



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